IN TWO PARTS — PART ONE

AIR CONDITIONING & REFRIGERATION NEWS

The Newspaper of the Industry

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Inside Dope

By GEORGE F. TAUBENECK

Learn to live and laugh — thus delay your epitaph

Stories of the Week

"Until recently I tried in vain to understand your type of art" somebody told Picasso. "A week in the country changed my outlook. In Nature I saw innumerable forms and figures like those you portray."

"Hmm," arched Picasso. "Then Nature is getting on the ball."

"You say you took your dog for a walk," cross-examined a legal beagle. "Did you stop anywhere?"

"Did I stop anywhere? Have you ever walked a dog?"

Into a Scotch and soda a bartender dropped a twist of lemon peel.

"Take it away," screeched the customer. "I hate lemonade."

Gags of the Week

People who have an hour to spare usually spend it with someone who hasn't.

Children are a comfort in one's old age. They make you older faster, too.

Most women struggle years and years to acquire a mink coat. Others quit struggling.—DONALD O'CONNOR.

Add Definitions

Billow: What you sleep on when you have a bad cold.

Pessimist: Woman who fears she can't squeeze her car into a small parking place. (An optimist is a man who figures she won't try.)

Expensive restaurant: Place where you are sentenced to bread and water for 30 minutes or more.

How to Checkmate Price-Cutters

Everybody in our business is bothered by screwball price-cutters. Following is sound advice to dealers and contractors, contributed by and winnowed from the experience of many good friends in our business.

1. Keep your pants on, and don't get scared. It's the frightened who cut prices.

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Why Homeowners Should Buy Air Conditioning

When you buy an automobile, it depreciates at least 20% the moment you drive it away from a dealer's showroom. That is true of practically anything else you purchase to *use,* rather than for investment.

Residential air conditioning is a conspicuous exception to the rule. It actually *adds* to the resale value of a house *more than you pay for its installation.* This is true immediately, and for three to five years thereafter.

Home air conditioning gives you pleasure, of course. Also it improves the health, good looks, and good tempers of your family. Furthermore, it elevates your stature in the eyes of friends and neighbors—and *is a sound investment as well.*

For the first time in his life, Mr. Average Citizen wants air conditioning PERSONALLY, and is willing to pay for it.

(Concluded on Page 50, Col. 1)

Air Conditioning 'Show Case' — With Specifications

This, the "Air Conditioning 'Show Case' Issue—With Specifications" can possibly best be read with the idea that it contains four principal kinds of information—all of which can be of vast assistance to anyone who has any kind of interest in the air conditioning industry.

1. **Specifications on the 1957 lines** of air conditioning equipment marketed by 106 firms. This specifications service, originated by the NEWS, is designed to tell specifically "who makes what" in room units, packaged commercial air conditioners and residential systems including heat pumps, with key information on every line.

2. **The various advertisements,** designed to demonstrate what manufacturers of air conditioning equipment and accessories are offering for the 1957 market.

3. **Special stories and articles,** such as how a contractor cuts the time needed for selling, administration, servicing (pg. 22); use of perimeter outlets (pg. 12); markets for, and methods of handling "in-the-wall" units (pg. 24); first of a series on "selling residential air conditioning for profit" (pg. 48); how to relate weather data to selling effort (p. 42); installation-by-installation record of Detroit air conditioning sales, a valuable guide to market planning (pg. 58); three types of service contracts, what they cover, how to use (pg. 76).

4. **Additional pictures** from the International Heating & Air Conditioning Exposition, providing a further line on available products to handle any type of air conditioning application.

Wolfson's Moves Might Emphasize Kelvinator Role

DETROIT—Some suggestions for "overhauling" American Motors Corp. operations that might include more emphasis on the Kelvinator Div. will be offered to George Romney, corporation president, when he meets with Louis E. Wolfson in Miami, Fla. soon.

Financier Wolfson was recently revealed as "probably the largest single stockholder" in American Motors. He and his wife voted 240,000 shares at the corporation's annual meeting last month. He admitted they now have considerably more.

He said that he had no idea how many shares his friends and associates might hold. American Motors has 5,670,430 shares outstanding.

Wolfson stated that when he meets with Romney in Miami and later in Detroit, "I will make certain suggestions for the

(Concluded on Page 4, Col. 3)

Hospital Authority Says Air Conditioning Is 'First Requirement'

PITTSBURGH—"Complete air conditioning should be the first requirement in new hospital construction and the first item in any hospital modernization program," a University of Pittsburgh physician declared here.

"There is certainly a definite need for air conditioning hospitals," said Dr. George J. Thomas, chief of anesthesiology at Pitt Medical school and director

(Concluded on Back Page, Col. 1)

Specifications Data In Middle Section

Specifications of 1957 self-contained air conditioner models of all leading makes will be found in a special section in the middle of this issue.

The section containing the specifications information has been so printed and bound that it may be easily removed from the issue (by pulling it away from the binding) at a later date, and filed for reference purposes.

FHA May Ease Home Cooling Requirements

WASHINGTON, D. C.—Supplied with requested operating and maintenance cost data on residential air conditioning by an industry advisory committee, the Federal Housing Administration recently indicated that it may ease up on its appraisal requirements on air conditioned houses.

Though no definite action was taken at the meeting of the committee with FHA officials and no future action is contemplated, an improvement in the appraisal situation is anticipated.

George S. Jones, managing

(Concluded on Page 2, Col. 4)

Utility's Policy May Affect Motor Requirements

PHILADELPHIA — Issuance of a "Statement of Policy With Regard to Single Phase 230 Volt Air Conditioning Installations" by the Philadelphia Electric Co. may help to spark a move that may lead to a revised set of motor starting current rules, applicable throughout the country.

The fact that the statement of policy was issued by Philadelphia Electric Co. is particularly significant because J. W. Anderson, general superintendent of the utility's Transmission & Distribution Dept., is also chairman of the Edison Electric Institute Group of the Joint ARI-

(Concluded on Page 96, Col. 1)

Gov't-Industry Cooling Symposium Set for April 3-4

WASHINGTON, D. C.—Preliminary program for the Government-industry symposium on air conditioning to be held here April 3-4 has been announced.

The symposium will be held in the auditorium of the Dept. of Commerce building, 14th St. between Constitution and E, N.W. It is being sponsored by the General Industrial Equipment Div. of the Business & Defense Services Administration in cooperation with the air conditioning industry.

Noting that "timely and important subjects will be presented by outstanding men from both industry and Government," H. B. McCoy, BDSA administrator, stated:

"We feel that the symposium

(Concluded on Page 5, Col. 1)

BEHIND PAGE ONE . . .

May 4-8 Western Show Now Backed Fully by Industry

LOS ANGELES—Full backing of all industry interests is now said to be assured for the Western Air Conditioning, Heating, Ventilating and Refrigeration Exhibit and Conference, to be held May 4-8 at the Shrine Exposition Hall here.

Some segments of the industry which have not favored all-out support of what are considered to be regional shows, are now said to be giving their full measure of support to the Western Show. Success of this Show is necessary if there is to be a future for other such Exhibits on the West Coast, it is felt.

Southern California business groups are actively backing the affair, and "customer" groups

(Concluded on Back Page, Col. 4)

FHA May Ease Requirements--

(Concluded from Page 1)

director of the Air-Conditioning & Refrigeration Institute, informed the FHA at the meeting that "in the very near future," the ARI would publish rating and testing standards for residential air conditioning equipment and would put a compliance program into effect.

May Publish Standard Soon

He told the NEWS later, that the standards may be published within 30 days and that public announcement on the compliance program may be ready for the ARI's annual meeting in May.

He cautioned, however, that the actual effect of the program would not be felt for several months after that. There are still several details to be worked out, he said.

This industry advisory committee meeting was a follow-up to a builder - industry - government conference held last summer in the National Housing Center. At that time home builders complained that local FHA field offices were unrealistic in qualifying buyers for air conditioned homes. They charged that difficulty in obtaining an acceptable valuation and a realistic valuation based on cost from FHA was losing them buyers.

Says Industry Didn't Offer Data

Norman Mason, FHA commissioner, declared that many of these complaints were due to failure by the industry to provide factual information with which FHA could arrive at some average cost and maintenance figures.

At this meeting, the committee informed FHA of new developments in air conditioning and the effect of operating costs on homeowners' budgets.

A report on maintenance and cost data, based on actual case histories of residential air conditioning systems was presented on behalf of the committee by Jones. The surveys were based on actual costs per metered kilowatt hour plus maintenance and repair bills for the systems.

Results of the cost samplings were low enough to allay apprehension that home air conditioning imposed on overly heavy burden on the family housing budget, according to FHA.

As to appraising the value of air conditioning to the homeowner, Mason said variable factors affect value, demand, and public acceptance from place to place and from time to time.

'When Public Accepts Cooling So Will FHA'

He told the committee that wherever the public was convinced of the value, air conditioning would have value, and FHA would give it full credit in its appraisals.

The amount that can be borrowed to buy a home under the FHA plan is determined by FHA's appraisal of value. Builders and equipment manufacturers have held that FHA appraisals often did not reflect full value of an air conditioning system.

The committee members agreed that much progress has been made in resolving past differences. "We're not very far apart. We're much closer than we were a year ago," was the consensus.

Attending the meeting were, in addition to Jones: Kenneth Behr, Lennox Industries, Inc.; Ned A. Cole, Austin, Texas homebuilder; Ralph A. Gonzalez, Airtemp Div., Chrysler Corp.; Richard G. Hughes, past president, National Association of Home Builders; William A. Lake, Carrier Corp.; Thomas W. McNeill, Air Conditioning Div., American-Standard Sanitary Corp.; G. R. Munger, Owens-Corning Fiberglas Corp.; Lee Nutter, Home Heating and Cooling Div., General Electric Co.; Frank J. Nunlist, Mueller Climatrol Div., Worthington Corp.; Don P. Petrone, Typhoon Air Conditioning Co., Inc.; and Harry H. Ward, Frigidaire Div., General Motors Corp.

For more information about products advertised on this page use Information Center, page 66.

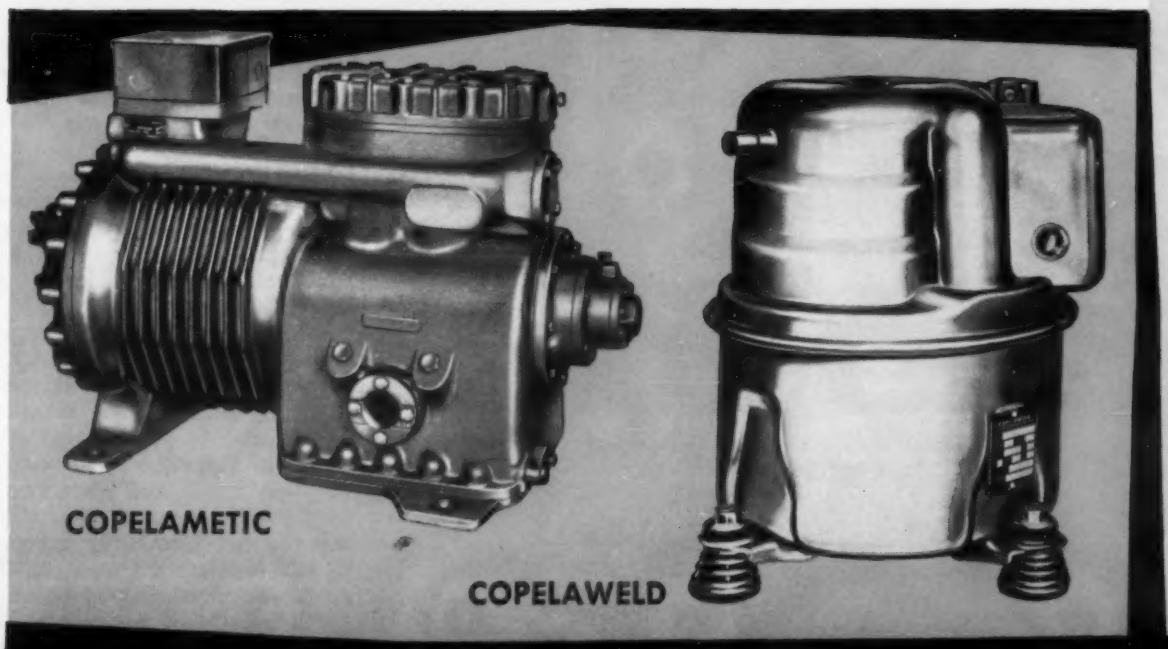
The "hottest" products are cooled by Copeland

Find the manufacturer of a famous line of air-conditioning or refrigeration products, and it's a good bet you've found another Copeland customer. Companies with a reputation for quality and service at stake, can't take chances . . . for the heart of their products, they demand motor compressors and condensing units by Copeland.

Since the industry was in swaddling clothes, Copeland has pioneered perfection . . . researching its needs, testing in laboratory and in the field, and building a progressively higher standard of performance and durability into every unit. You'll make and keep warm friends when Copeland does your cooling.

SINCE 1918 **Copeland** REFRIGERATION CORPORATION, Sidney, Ohio

Manufacturer of the heart of
America's finest commercial refrigeration
and air conditioning



COPELAMETIC

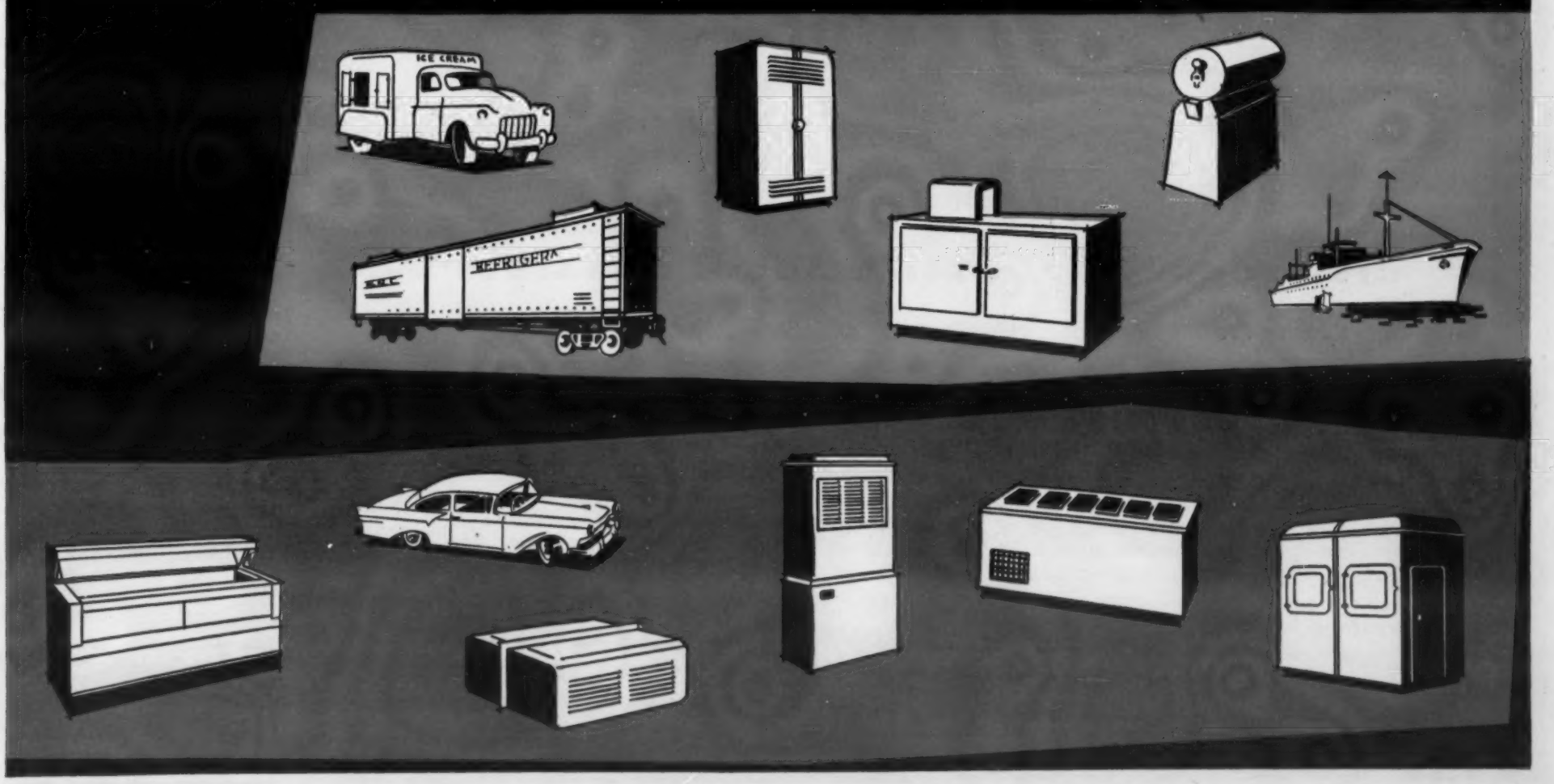
The *Accessible* Hermetic

You can get to direct-drive Copelametic units effortlessly . . . in a jiffy. No belts or seals, no manual oiling. 90% of service costs eliminated. Models for all applications—air and water-cooled—from ⅓ through 3 h.p. Self-contained units ⅓ and ½ h.p. Suction-cooled also available.

COPELAWELD

Hermetics — Sturdy, Silent, Safe

The leaders' choice for refrigeration and air-conditioning products. Vibration-free; delivers high capacities at lowest current output. Freon-12 and Freon-22 models; sizes ½ H.P. through 1½ H.P.



For more information about products advertised on this page use Information Center, page 66.

'Refrigeration News' Ups Schildhammer, Price, and Jones

DETROIT—Three promotions at Business News Publishing Co., publisher of AIR CONDITIONING & REFRIGERATION NEWS, have been announced by Edward L. Henderson, president of the publishing house.

Robert M. Price, manager of the New York office, and P. Allen Schildhammer, manager of the Chicago branch, became vice presidents.

Warren L. Jones, general manager, takes on the added duties of treasurer of the company, with headquarters in Detroit.

Price, who has been with the firm 19 years, and Schildhammer, with 11 years' service, will continue to head the branch offices, Henderson further commented.

Waco Appliance To Concentrate on Heating, Cooling

ATLANTA—Waco Appliance & Television Co. is discontinuing its retail appliance, television, and electric housewares operation to concentrate on air conditioning and heating, according to Tom Irwin, general manager.

To be known as Waco Heating & Air Conditioning Co. at its present location, 75 Alabama St., the firm will handle all types of commercial and residential air conditioning and heating installations.

Irwin will be director of sales and promotion.

Gets Cooling Job

PINE BLUFF, Ark.—Air conditioning contract for the new Sears retail shopping center here went to Fagan Air Conditioning Co., Little Rock.

Outlook at Kelvinator--

(Concluded from Page 1, Col. 2)

improvement of the company earnings. This might call for a trimming, paring, and pruning of certain unprofitable operations and possibly an expansion of others."

Wolfson declined to elaborate because "I wish to make my suggestion first to Romney."

KELVINATOR HAS BEEN GETTING STRONG PUSH

Even without Wolfson's suggestions, however, American Motors is giving a strong push to its most profitable division, Kelvinator.

Joseph W. Lelivelt, manager of refrigerated products, has announced that nearly $4 million worth of tools and equipment will be added to Kelvinator's main appliance plant in Grand Rapids, Mich. this year.

This will include a special automated line for production of refrigerator outer shells, claimed to be among the first installations of its type in the appliance industry.

Lelivelt said the automation machine, costing more than $725,000, represents the largest expenditure for one machine in Kelvinator's history.

The new 19-station welding and forming machine will occupy 150 ft. of floor space. It will produce all of the company's refrigerator models except the "Foodarama" and 24-in. models.

Already in operation are a new automatic styrofoam enrobing process for insulating evaporators, new equipment for manufacturing roll-bond aluminum evaporators, and new aluminum anodizing equipment.

All of the new equipment will be operating by September.

Walter Jeffrey, Kelvinator vice president and general manager announced that following the biggest January in Kelvinator's history, February billings to dealers showed a gain of 8% over the same month a year ago.

Romney declared, "We are proud of the consistent strength of our appliance business and of its recent improvement."

Speaking of Wolfson's recently reported active interest in American Motors, he said, "I expect to explore and consider any proposals he (Wolfson) may have. However, I would be strongly opposed to discontinuance of our automotive activities. There is increasing evidence that our pioneering of smaller cars for America is making steady progress."

He continued, "Based on my information, Wolfson has proved to be a successful investor in other enterprises and has strengthened the companies in which he has invested.

"His purchase of American Motors stock evidences belief on his part that he can capitalize on this investment because of the company's future possibilities. We share this viewpoint."

WOLFSON'S OTHER BUSINESS ACTIVITIES

Wolfson, who was prominent in the news during the past few years through his unsuccessful effort to take over management of Montgomery Ward & Co. and through dispute over his operation of the Capital Transit Co. in Washington, D. C. said his family have been sizeable stockholders in American Motors since its inception in 1954 and had held Hudson Motor Co. stock since 1952.

He stated, "After we discuss a program for the company, I expect Romney and I may explore the possibility of bringing new earning power into the company and thereupon reverse the loss trend and go forward on a profitable basis, thus utilizing the tax loss carry forward to the maximum benefit of the stockholders."

His statement referred to the fact that American Motors has lost money every year since its inception.

"I would like to emphasize at this time," he continued, "that my first and prime business devotion is to Merritt-Chapman & Scott. Speaking as an officer of Merritt-Chapman & Scott (he is chairman of the board and president), I will state categorically that no consideration has been given to the possibility of a merger between these two companies."

3 New Service Centers Opened by Wesco

SAN FRANCISCO — Three new Bay Area major appliance service centers have been opened in recent weeks by Westinghouse Electric Supply Co.

For more information about products advertised on this page use Information Center, page 66.

Government-Industry Symposium--

(Concluded from Page 1)

offers a unique opportunity to explore many areas of common concern to Government and industry and should lead to an active program of mutual benefit."

WEDNESDAY MORNING SPEAKERS

McCoy will serve as chairman of the first morning session on Wednesday, April 3. Following registration starting at 9 a.m., the symposium will get under way at about 9:45 a.m. with an address of Welcome by Sinclair Weeks, Secretary of Commerce. Acceptance for the industry will be made by Cloud Wampler, chairman of the board, Carrier Corp., who is to speak on "Growth of the Industry."

Scheduled next is a talk by Franklin G. Floete, administrator of general services, who will discuss "Air Conditioning of Government Owned and Leased Buildings."

Following an intermission, Floyd S. Bryant, Assistant Secretary of Defense (Properties and Installations), will talk on "Air Conditioning of Military Installations" and J. G. Jewett, vice president, Prudential Insurance Co. of America, will speak on "A User's Viewpoint."

Final talk at this session will be given by John W. Macy, Jr., executive director, U. S. Civil Service Commission. He will discuss the subject, "The Importance of Physical Surroundings in Public Employment."

WEDNESDAY AFTERNOON SUBJECTS

After a luncheon, the Wednesday afternoon session will start at 2 p.m. with William H. Aubrey, vice president and sales manager, Frick Co., as chairman.

Speakers and their subjects are:

"Industry's Facilities and Programs," M. M. Lawler, vice president, Worthington Corp.; "The Government Problem in Air Conditioning and Industry's Assistance Required," Fred S. Poorman, deputy commissioner, Public Buildings Service; "Air Conditioning of New Construction," Leon Chatelain, Jr., president, American Institute of Architects; "Air Conditioning of Existing Structures," C. S. Leopold, consulting engineer.

THURSDAY MORNING SESSION

The morning session on April 4 will begin at 9:45 a.m. with a presentation by the session chairman, George S. Jones, Jr., managing director of the Air-Conditioning & Refrigeration Institute.

Next speaker will be John Haines, vice president, Minneapolis-Honeywell Regulator Co., whose subject is "The Economics of Air Conditioning." Conferees will also hear talks by C. E. Sigety, deputy commissioner, Federal Housing Administration, and Richard P. Gaulin, mechanical engineer, Public Health Service. Sigety's talk will deal with "Housing" and Gaulin's with "Hospitals."

After an intermission, Roger W. Fulling of du Pont will make an industry presentation. This session will close with a summation by the chairman. Then comes a luncheon session.

PANEL PLANNED FOR THURSDAY AFTERNOON

Programmed for Thursday afternoon is a panel session. George R. Curtis, deputy director, General Industrial Equipment Div., BDSA, will be the chairman. William T. Smith, chief, Refrigeration & Air Conditioning Section, Directorate of Facilities Support, Headquarters, U. S. Air Force, will serve as the panel moderator.

Panel members will include James Morris, chief engineer of repairs, Public Buildings Service, General Services Administration; George A. Grimm, chief, Utilities Div., Assistant Secretary of Defense, Properties and Installations; Cecil Boling, president, treasurer, and general manager, Dunham-Bush, Inc.; and R. K. Serfass, vice president, York Div., Borg-Warner Corp.

Agenda for the symposium was drafted by the joint Government-Industry Committee set up as a result of the recommendation of the Air-Conditioning & Refrigeration Industry Business-Defense Advisory Committee in January of this year.

Invitations to the symposium are being mailed from the Dept. of Commerce to both Government and industry invitees. The trade and general press will be invited also. Individuals in the industry who have not already received invitations may request them by writing to George R. Curtis, Business and Defense Services Administration, Dept. of Commerce, Washington 25, D. C.

Persons planning to attend the symposium are advised to make early arrangements for hotel accommodations.

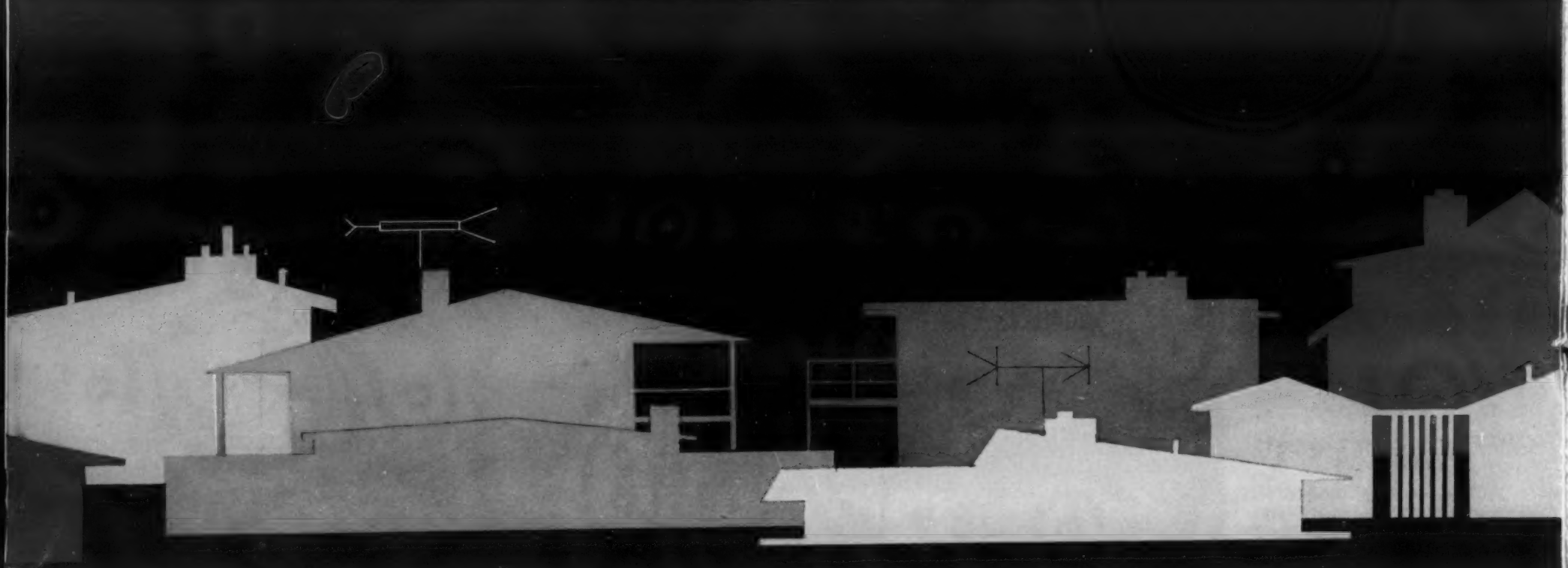
Western RSES Group To Meet March 29-31

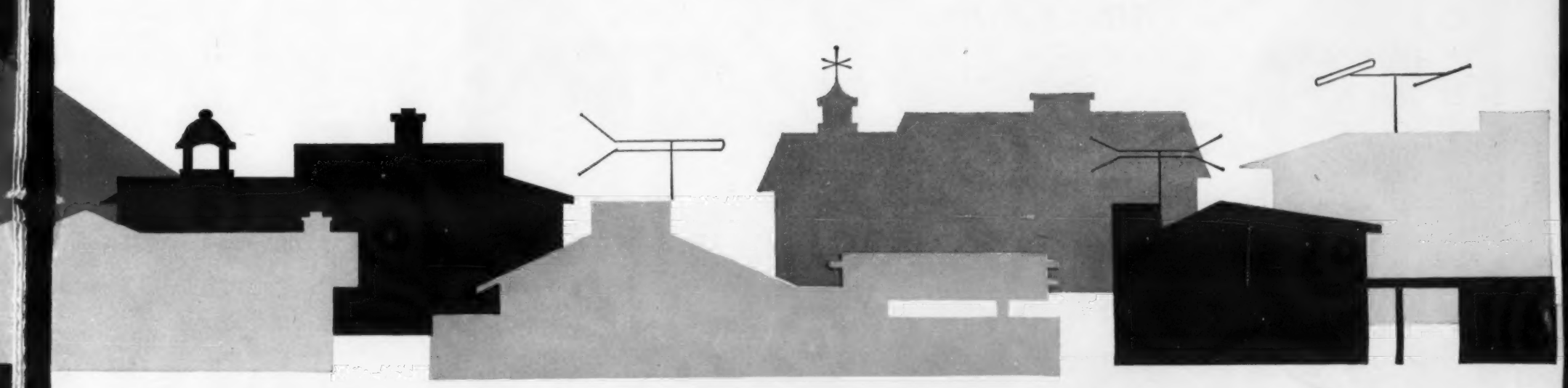
PORTLAND, Ore.—An educational program will feature the annual meeting of the Western International Association of Refrigeration Service Engineers Society to be held here Friday, Saturday, and Sunday, March 29-31.

WIA represents RSES chapters in Idaho, Oregon, and Washington, and the province of British Columbia. Paul E. Darby, Tacoma, Wash., is the RSES international director for the WIA area.

There's no such thing

as an Average House





Only Westinghouse gives you "Just Right" Air Conditioning for each home!

It's a fact! Cooling requirements differ from house to house. Size, style, exposure, local climate, number of inhabitants—and more, all make a difference. You'll find that Westinghouse—the only "Really-New" Air Conditioning line—gives you the *one best* unit for each of your customers—wherever you sell.

While competitors *try* to satisfy all customers with but 3 remote condensing units (2, 3, and 5 HP), Westinghouse gives you 7! With Westinghouse there's no "too much or too little" cooling capacity . . . you can close each sale with cooling that's "Just Right" for the job. And you can do it with profit, because "Just Right" cooling means *just right* pricing!

That's not all! New Westinghouse units are air cooled; install easily out-of-doors . . . combine with any forced warm air heating system (using the same ducts). Deliver complete home air conditioned comfort automatically—at the touch of a finger tip. Finished in handsome beige and charcoal, they blend with any exterior decor. They're *whisper quiet* . . . exhaust air up and away from house . . . do not annoy neighbors or damage shrubs.

What's more, Westinghouse Dealers get—fast delivery, sales training, technical aid, finance plans, local advertising, sales promotion—and more. These are just a few of many reasons why a Westinghouse Franchise is so highly valued by leading contractors and dealers across the nation. For complete details write to: Westinghouse Air Conditioning Division, Dept. 1C18, P. O. Box 510, Staunton, Virginia.

J-80540A

YOU CAN BE SURE...IF IT'S

Westinghouse

AIR CONDITIONING DIVISION STAUNTON, VIRGINIA

Inside Dope

By GEORGE F. TAUBENECK

(Concluded from Page 1, Col. 1)

2. Get all the facts before you try to meet lower prices;

(a) check the quantity figured by competition.

(b) check the quality figured by competition.

(c) check the service figured by competition.

3. Persuade customers to make allowance for differences in your specifications or service which justify your price.

4. Recheck your own estimates. Compare your quantities, qualities, and services to those of competition, and then you may want to re-figure. You could be wrong, you know.

5. Often the customer is bluffing. Double-check lower quotations he tells you about. Maybe they aren't real. Many a false price quoted by a buyer never was quoted by competition.

6. Look for a "loophole" in a lower competitive price—it's nearly always there.

7. Insist on honest comparative specifications. Then your cut-price competition can be shown up as offering two apples for the fair price of three, instead of *vice-versa*.

8. Feature your exclusive gimmicks, along with special things you do for customers to keep them happy and satisfied.

9. Sell a *package*. By adding a service contract and guarantee, you can avoid product-price comparison by substituting an over-all *package* quotation.

10. Detect ways competition might be trying to chisel on the job, and expose them.

11. Give the buyer a healthy fear of cut prices. Cite examples and case histories of the sad experiences of people who bought on price alone.

12. Sell your company and its reputation. Emphasize all the superior facts about your company—its history—its personnel—its experience. Give buyers a yardstick of CONFIDENCE. Remember, superior salesmanship can win over mere bidding and frantic chiselling.

13. Demonstrate the difference between price and value. Talk customer benefits instead of acting like you're running a bankruptcy sale.

14. Consider the ethics and future implications of cutting or not cutting your price. You may want to sell that customer again.

15. Don't get sore if, after all you've done, your client decides to buy on price alone. Make a good personal impression, and ask him to let you try for his future business. In other words, it pays to be a good sport.

Midway Humor

"If you are determined to break up your marriage, everything you two possess must be divided equally," cannily directed a veteran divorce court jurist.

"What happens to our three children?" soft-voiced the wife.

Latter-day Solomon reiterated:

"Everything you own will have to be divided equally. . . ."

"C'mon home, Henry," she ear-snatched the wan husband. "We'll be back next year with a pair of twos, judge."

A North Adams, Mass. man who ran for city council revealed in six little words how not to win friends and influence people. His campaign expense account consisted of this frank statement:

"No contributions, no expenditures, no success."

Silent Suffering

Watching TV dramas, we've often wondered:

1. Why actors, when cut off at a critical point in a telephone conversation, always jiggle the phone cradle frantically despite the fact that they never (in the plays we see) get any response from the operator or the party at the other end.

2. Why actors, when pretending (in close-up shots) that they're driving an automobile, keep turning the steering wheel sharply one way and the other while conversing with a passenger. We get so worried that they'll be arrested for reckless driving that we can't concentrate on the dialogue.

Last Gasps

Flower vendor, when business was slow, put up this sign:

"This gardenia will make you feel important all day long."

Definition of Middle Age:

When all you exercise is caution.

"Payments on my new car," fellow was overheard, "keep me so strapped I don't need a safety belt."

"Deposit 25 cents, please," spoke the phone operator's trill.

"What?" roared a big man in a phone booth. "For 25 cents down in Texas I could telephone Hell."

"No doubt," she upped, "in Texas that would be a local call."

Early to bed and early to rise . . . and you'll meet very few of our best people.—*Ceramic Forum.*

Add Newspaper Boners

The only limitation on Ike's champaign activity will be a matter of taste and preserving the dignity of the presidency.—Louisville (Ky.) *Courier-Journal.*

A spokesman said about 6,000 persons a day have been visiting the big sideshow tent, about 20% of them convention delegates, and 80% of them people. —*Detroit News.*

This time Truman wet all out for Averill Harriman.—*Columbus Ledger.*

Forty per cent of the women in Iowa are overnight, says a nutrition expert.—*Sioux City Journal-Tribune.*

The widow, Mary, 78, was jailed on charges of resisting offers.—*Detroit News.*

"I'm glad you published those articles," Trondle said. "They have enabled me to find many not otherwise have been readily not otherwisehave been readily detected."—*Detroit Free Press.*

Love Thrives on Fertilizer.—*Portland Oregonian.*

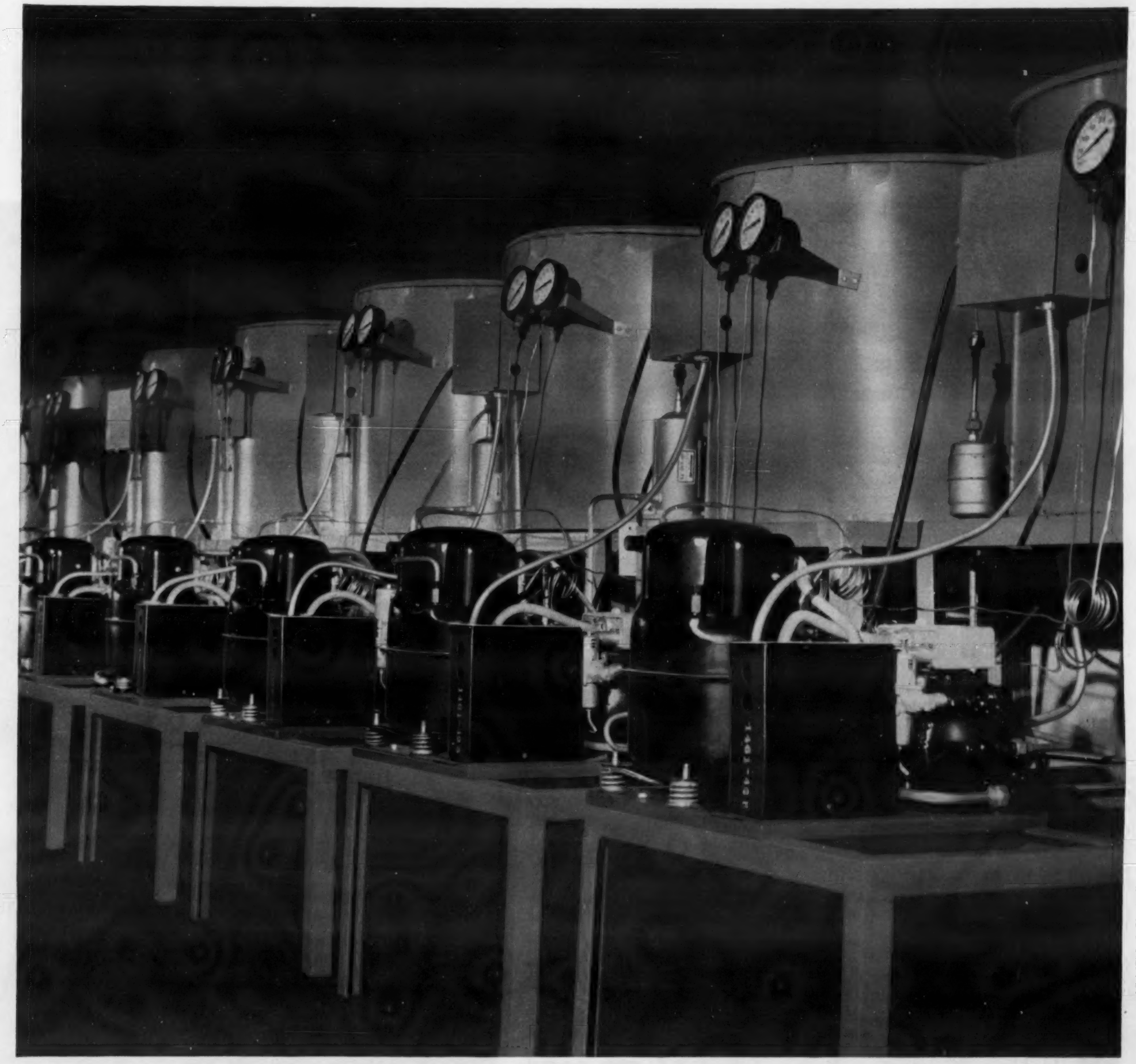
Dag Reports Progress; Egyptian Jet Downed.—*Norfolk Daily News.*

Cargo Moved by Airline Up. —*New Orleans Item.*

Linens Are Offered For Outdoor Eating.—*New York Times.*

Steel Figure Will Address Concrete Men.—*Dallas Morning News.*

For more information about products advertised on this page use Information Center, page 66.



WE MURDER COMPRESSORS TO PROVE DEPENDABILITY!

Yes, we're death on compressors to make sure our compressors will give long life for you. Here in Evansville, Indiana, in this modern Life Test Laboratory, we run compressors to death. They die hard because of the rugged dependability built into every unit.

It's a life and death struggle . . . compressor vs. its natural enemies: friction, heat, moisture and corrosion. Many of the component parts . . . the valves, pistons and motors have been tortured continuously for more than 4 years, or 20 years' life in a normal air-conditioner.

LIFE TESTS PROVE QUALITY

The life test proves to us, as it has to many users, that Bendix-Westinghouse compressors perform efficiently far beyond the warranty period. Two things are responsible for this: (1) Our quality-control standards are not being surpassed anywhere; (2) the over-all experience of Bendix-Westinghouse in building compressors of all types cannot be matched.

We would welcome an opportunity to tell you about life tests and other research now going on to make Bendix-Westinghouse compressors the industry's leaders in rugged, dependable service. We'd also welcome the opportunity to quote prices and delivery on our complete line of hermetics ranging in capacities from ¼ to 7½ H.P.

Write us for complete information and a prompt visit from one of our regional managers. Evansville Division, Evansville 11, Indiana. *Export Sales:* BENDIX INTERNATIONAL, 205 East 42nd St., New York, New York.

EVANSVILLE DIVISION of

Bendix-Westinghouse

Automotive Air Brake Company

For more information about products advertised on this page use Information Center, page 66.

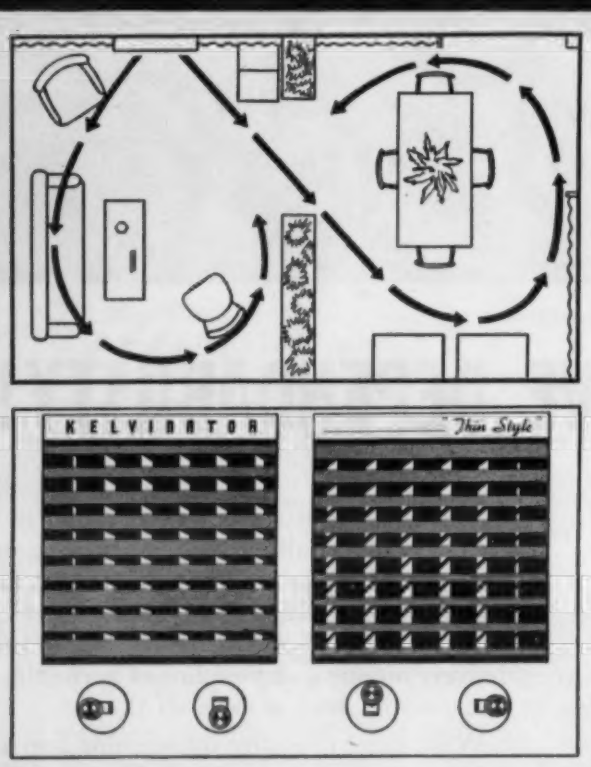
KELVINATOR WITH TWO-DIRECTIONAL COOLING

1957's Greatest Merchandising Feature

Southern Markets Report Dealer Retail Sales of New 1957 Kelvinator Air Conditioners . . .

RETAILERS SOLD 3 TIMES AS MANY THRU MARCH 1ST AS IN 1956!

Convincing Proof of Customer Endorsement of Kelvinator's New Models, New Styling, New Pricing and Great New Feature



WHAT IT DOES

Flick the control knobs and, with Kelvinator Two-Directional cooling, the cold air stream from the left-hand louvers can be directed into the living room while the right hand air stream is poured through the doorway into the dining room beyond.

HOW IT WORKS

Horizontal louvers can be rotated up or down to direct either or both streams of air *at the height desired.*

Vertical louvers can be rotated far to the right or left to focus either or both streams of air *in the direction desired.*

TWO-DIRECTIONAL COOLING

that Cools Two Rooms at the Same Time with One 1957 Kelvinator Air Conditioner!

Kelvinator MEANS BUSINESS

Division of American Motors Corporation, Detroit 32, Mich.

For more information about products advertised on this page use Information Center, page 66.

OUT-DEMONSTRATES...OUT-PERFORMS ALL OTHERS

A Model to Fit Every Sales Opportunity

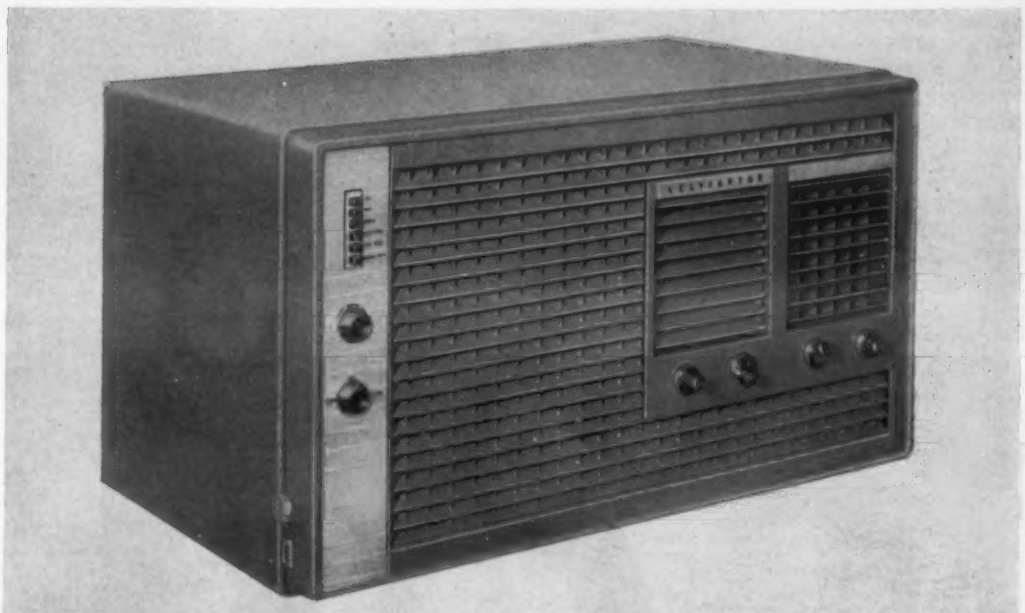
KELVINATOR "THIN-Style" MODELS

with TWO-DIRECTIONAL COOLING

INSTALL IN THE WINDOW OR THROUGH THE WALL

Every one of the slim and elegant new "THIN-Style" models has Two-Directional cooling, thermostatic control, 3-speed blower, fresh air and exhaust vents, replaceable Fiberglas filters. New Kelvinator "THIN-Style" models install in the window or through the wall. They extend only 2½" into the room if wall mounted; outside overhang is kept to a minimum.

"THIN-Style" Model RCG-109WS 1 H.P., 115 Volts
"THIN-Style" Model RCG-109W 1 H.P., 230 Volts
"THIN-Style" Model RCG-159W 1½ H.P., 230 Volts



KELVINATOR CUSTOM MODELS with TWO-DIRECTIONAL COOLING

All Custom Models mount flush with the window sill. Thermostat and fan switch are combined in a single simple dial control. Replaceable Fiberglas filters.

CUSTOM LINE MODELS

Model RCG-78RS ¾ H.P., 7½ Amp., 115 Volts
Model RCG-108RS 1 H.P., 11.2 Amp., 115 Volts
Model RCG-158R 1½ H.P., 230 Volts
Model RCG-108R 1 H.P., 230 Volts

3 NEW 115 VOLT MODELS

¾ H.P. 7½ AMP.
115 Volt Custom Model

1 H.P. 10.8 AMP.
115 Volt "THIN-Style" Model

1 H.P. 11.2 AMP.
115 Volt Custom Model

BIG NEW 1957 TRAFFIC BUILDER

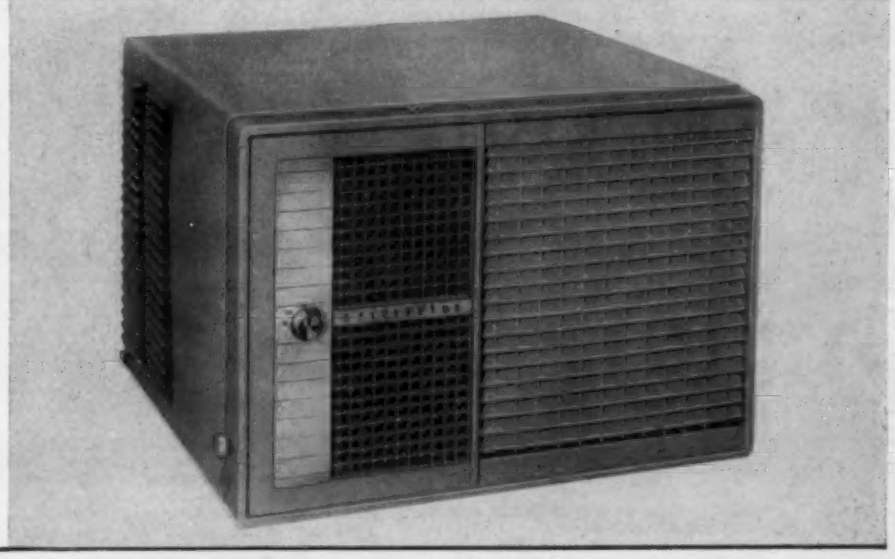
KELVINATOR DELUXE 1 H.P.

Priced and Styled for Big Volume

YES, HERE'S THE VALUE THAT WILL BRING THEM IN!

Here is a price leader with terrific appeal. It's a big deluxe 1 H.P. unit priced as low as many so-called "Bargain" ¾ H.P. models. Feature it in your window, on your floor, in your advertising. It is an easy step-up from this to your top feature models with a world of extra profit opportunity.

BIG COOLING CAPACITY AT A LOW, LOW PRICE



ALSO—CUSTOM MODELS FOR CASEMENT WINDOWS—POWERFUL NEW 2 H.P. MODELS FOR LARGE HOMES, OFFICES, STORES AND SMALL SHOPS!

GOOD BUSINESS FOR YOU!

For more information about products advertised on this page use Information Center, page 66.

Kroeschell Engineering Ups R. A. Kroeschell to Chairman

CHICAGO—The directors of Kroeschell Engineering Co., Chicago air conditioning, refrigeration, and heating contractor, announce the election of Robert A. Kroeschell as chairman of the board, succeeding Arnold H. Goelz, who will continue as treasurer and director of the firm.

Other officers and directors re-elected were Paul H. Kroeschell, president; Hans A. Stade, executive vice president; and V. Ferson, secretary. Also re-elected vice presidents were William Christmann, Harry Coesfeld, Thomas McCarthy, and John LeComte.

Appointed project engineers were Raymond Stille, James Baker, Leslie Vinge, Robert Mueller, George Forgue, Alfred Koglin, Jerry Ocheltree, and Malcolm Derby.

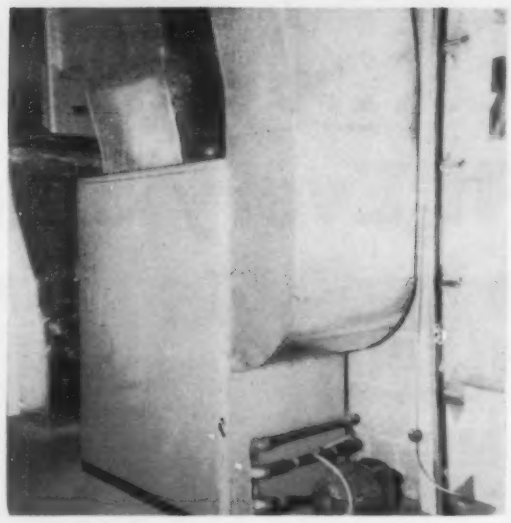
New Hotel-Motel Offers Individual Room Conditioning

NORWALK, Conn. — New Treadway Inn, a combination hotel-motel similar to that of the same name in Rochester, N. Y., with room controlled air conditioning opened here recently.

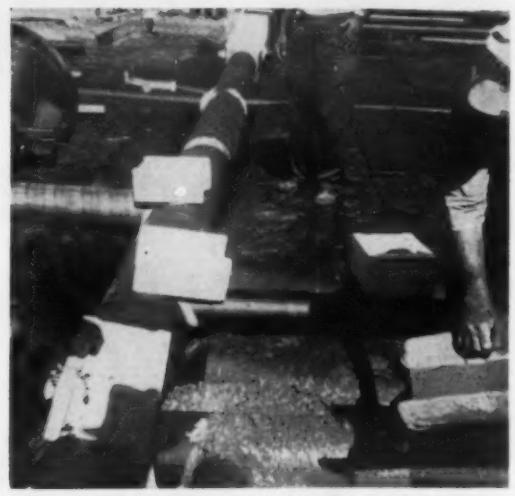
First wing, which opened Feb. 24, is designed essentially for travelers. It consists of a 75-room, two-story, white brick, structure with dining facilities and cocktail lounge, it was disclosed.

Foundations are laid for a second wing to be added early next year. This will embrace large ballroom, dining, and function rooms making it a center for community activities, the management of the inn reported.

Use Brandes Perimeter Baseboard Outlets for Cooled Air



HEATING-COOLING plenum of 3-ton Frigidaire package unit and 125,000 B.t.u. Janitrol furnace located in the garage at the rear of the Belleville, Ill. house is shown above.



ALL ductwork is permanent part of the concrete foundation, consisting of cardboard-asphalt pipe. It runs from the garage heating-cooling units to a plenum in the exact center of the floor.

Garage-Remoted Units Provide Year-Round Home Conditioning

BELLEVILLE, Ill. — Both heating and cooling in a seven-room residence here are provided through Brandes perimeter baseboard outlets, in an experiment which worked out successfully for Lee Kiefer, L. H. Kiefer Sales and Service, Frigidaire air conditioning dealership here.

This was the first time that Brandes perimeter baseboard outlets had been used for introducing cooled air, as well as heated air, according to Kiefer, who worked out the system with the architect before the installation.

It was felt that combining heating and air cooling through the same ductwork would provide for more even, effective cooling of the home during Belleville's exceptionally hot summer weather. It was also felt that considerable expense could be saved in thus unifying the two systems.

A 3-ton Frigidaire package unit and a 125,000 B.t.u. Janitrol furnace were located in the garage at the rear of the house. Air travels as much as 50 ft., but since the system is pressurized, distribution has been excellent, according to Kiefer.

All of the ductwork was made a permanent part of the concrete foundation of the building and consists entirely of cardboard-asphalt pipe. It runs from the heating and cooling units in the garage into a plenum in the exact center of the floor.

Asphalt cardboard run-off ducts radiate spider-fashion out to the 16 Brandes automatic-damper-equipped baseboard outlets.

There are thus 16 boxes built into the wall at floor level to provide an even, smooth floor of air at 16 points through the house.

Operating in connection with the Frigidaire ACB unit and the Janitrol furnace, is a "Dura-Tube" ceramic-coated heat exchanger in the supply duct.

Both cooled and heated air rise evenly throughout the perimeter outlets, Kiefer has found. The system, having already operated through one winter and one summer, has proven more than adequate for cooling and heating the seven-room house.

American Coils Ships Heat Pumps Within 48 Hours After Moving Into New Plant

FARMINGDALE, N. J.—Improved production facilities made it possible for American Coils Co. to make recent first shipments of heat pumps and air conditioners from its new plant a full 30 days ahead of schedule, Michael Parcaro, American Coils president, announced.

The first shipment, an ACI-H-100 heat pump, left the new plant less than 48 hours after the company completed the move from its former Newark, N. J. headquarters early in January. It was sent to Graves Bros. Refrigeration in Tampa, Fla.

Immediately following this, 14 air conditioners, ranging in size from 5 to 10 hp., were shipped to Brunner Mfg. Co. American Coils manufactures Brunner units under contract.

Parcaro attributed the cut in the schedule to the new plant's modern design and facilities. He singled out a novel electrical bus duct system as the biggest contributor to the rapid production start-up. This system is designed to allow machinery to be plugged in at any location within the manufacturing area. This made it possible for production to go ahead while the building was still being finished.

Ground was broken for the modern, 63,000-sq. ft., single story office and manufacturing building last July. The building is fully air conditioned for both winter and summer by American Coils made heat pumps, the company said.

2 Symposiums To Lead ASHAE's Murray Bay Meeting June 24-26

NEW YORK CITY — The semiannual meeting of the American Society of Heating & Air-Conditioning Engineers will be held June 24-26 in the Manoir Richelieu, Murray Bay, Que., Can., with presentation of papers and two symposiums planned for the three-day meeting.

One of the symposiums is on air conditioning instrumentation and it will be moderated by Prof. C. H. Pesterfield, East Lansing, Mich. The other, a symposium on sound and vibration, is to be moderated by J. B. Graham, Buffalo.

It is the intention of the Program and Papers Committee, (Walter A. Grant, Syracuse, N. Y., chairman), that approximately 14 papers will be included in the program. According to present plans, one set of papers covering the subject of sound, may be scheduled for a session prior to the symposium on sound and vibration.

The Montreal Chapter Committee on Arrangements, under the general chairmanship of D. Lorne Lindsay, is planning a number of special events for the lighter side of the meeting. The annual ASHAE golf tournament, the semiannual banquet, and other entertaining events will be on the program.

Working with Lindsay are assistant chairmen W. G. Hole, H. G. S. Murray, B. J. Horsburgh, and R. J. Ker. The honorary chairmen are F. A. Hamlet and G. Lorne Wiggs. Montreal Chapter members in charge of particular phases of the arrangements are W. W. Timmins, reception and registration; A. E. Horsburgh, ladies; Leo Garneau, transportation and hotel reservations; Ralph Grossman, finance; G. W. Martin, entertainment; and A. Williams, sessions.

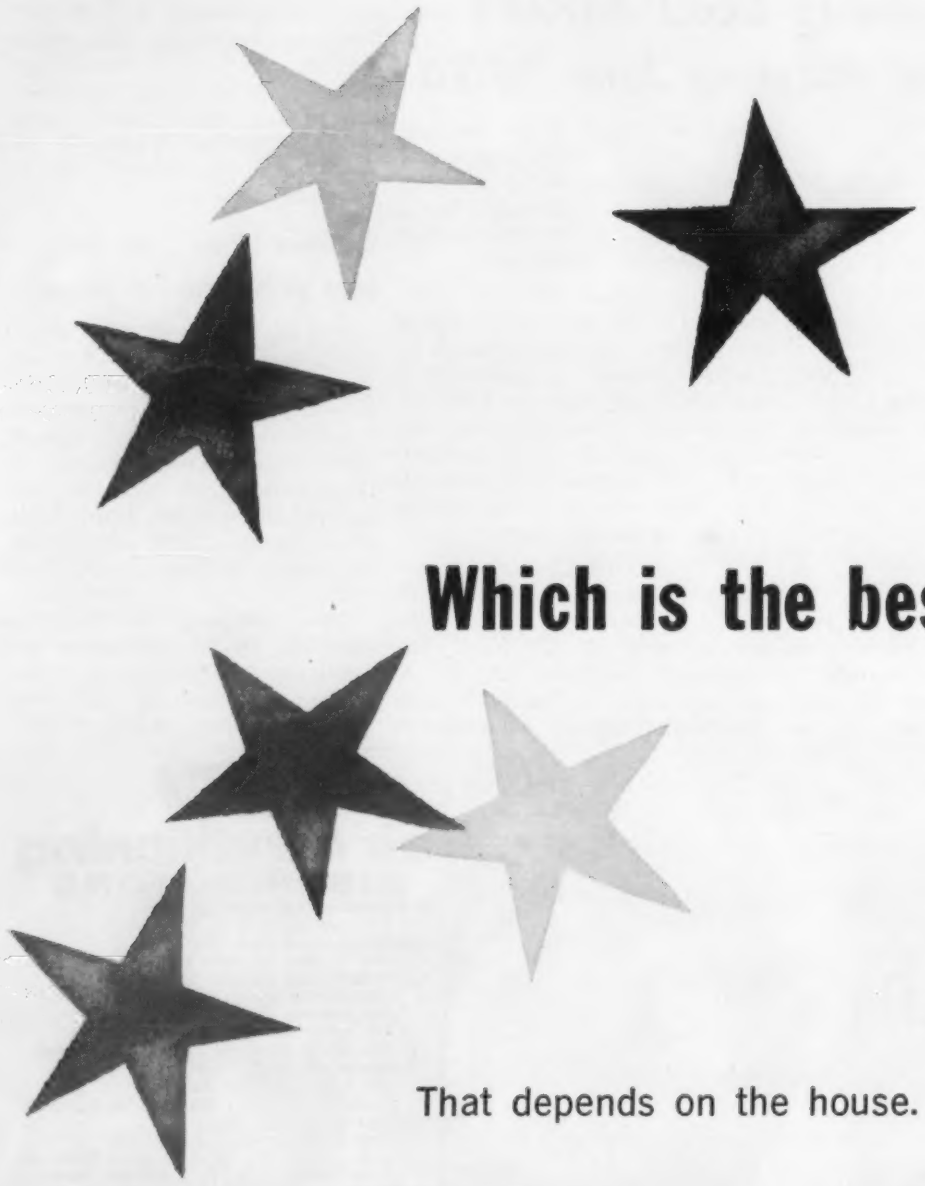
Southern Idaho Sales Spurt Seen as Natural Gas Comes

BOISE, Idaho—First natural gas deliveries have been made to customers in southern Idaho, Intermountain Gas Co. reports.

Service has been established, and within the next few months thousands of new customers will be on line in Boise, Buhl, Filer, Georgetown, New Plymouth, Payette, Soda Springs, and Twin Falls.

The company is reported carrying on an aggressive gas appliance merchandising campaign, contributing to what "will be busiest selling year."

For more information about products advertised on this page use Information Center, page 66.



Which is the best way to air condition a house?

That depends on the house. The size, the type of architecture, the kind of heating plant, and the climate can make a big difference.

No one way is best for all houses. That's why Carrier has such a wide selection of residential air conditioning and heating equipment. For example, the six ways shown on the opposite page are only a few of the many choices a Carrier dealer can offer his prospects. He can sell the one that best fits his prospect's needs.

Carrier dealers are better informed on installation techniques, too.

Would you like to be a Carrier dealer? Call your nearest Carrier distributor.

Or write Carrier Corporation, Syracuse, New York. Carrier

It's time to call Carrier. You'll find your Carrier distributor's name in the Classified Telephone Directory.

For more information about products advertised on this page use Information Center, page 66.

For new construction you can recommend a Carrier Year-round Weathermaker.* This one is for large homes, the one at the right is for smaller homes. They supply cooling up to 7½ tons, heating from 84,000 to 152,000 Btu/hr output. Gas or oil fired, air or water cooled. Both heating and cooling regulated by one control.

To replace old furnaces you can convert your prospects to cooling and heating with a single Carrier Year-round Weathermaker. It takes no more space than the old furnace and in most cases can be connected to the same ducts. Controls and electrical connections are pre-assembled for fast installation and service.

To add summer cooling to warm-air heating systems in good condition, you can offer this Carrier Summer Weathermaker. No extra floor space required. It is shown below a downflow furnace, but there are models for all type furnaces. Air-cooled refrigeration section locates outdoors. Capacities from 2.1 to 4.8 tons.

For houses with furnaces in attic or crawl space you can add this special Summer Weathermaker to a horizontal furnace. It uses the same circulating fan, filter and ductwork as the furnace. There are also models of Summer Weathermakers for houses with steam heat or hot water heat or no central heat at all.

For heating only but with the opportunity to add cooling at a later date, you can sell the Carrier Winter Weathermaker—the furnace with a future. Thermostat, fan and cooling coil casing are all set for the addition of cooling. 37 models available in gas and oil fired types and for upflow, downflow and horizontal applications.

For cooling one or two rooms, offer your prospects a Carrier Room Weathermaker. This is the new Console Room Weathermaker—with the slim silhouette. Doesn't block light or view. 25 models of Carrier Room Weathermakers for in-the-window installation. Carrier Room Air Conditioners have highest BTU capacity.

*Reg. U.S. Pat. Off.

For more information about products advertised on this page use Information Center, page 66.

Appliance Store Opens

JACKSONVILLE, Fla.—With Jack Dailey as manager, the seventh McDuff Appliance Store has opened here at 1919 Kings Rd.

2 States Study Natural Gas Heating Additions to Codes

PORTLAND, Ore.—New heating sections of building codes are in the study stage of most cities in Washington and Oregon that now have new natural gas service, A. O. Leach, engineer for the Portland Gas & Coke Co., reported here recently.

The cities of Vancouver, Pasco, and Bellingham, in Washington, have already adopted heating codes applying to natural gas equipment, he further indicated in the announcement of the state's action.

Komroff Predicts 115-V. Room Units To Capture 70% of Potential Market

PHILADELPHIA — A prediction that the future will bring window air conditioners "with built-in electrostatic filters, ozone lamps, deodorizers, and oscillating grilles" was made here at a recent meeting of the local American Society of Refrigerating Engineers section.

In addition, Paul Komroff, chief engineer of Quiet-Heet Mfg. Co. said he believed window units would have nameplate ampere ratings instead of horsepower and B.t.u.h. rating per amps instead of horsepower with high power factor and low operating costs.

Komroff has worked on development of window air conditioners since 1934 and is considered one of the pioneers in the use of hermetic units replacing open-type compressors. He stated that "the ¾-hp., 7½-amp, 115-v. and 1-hp., 12-amp, 115-v. units are rapidly attaining 70% of the potential market." Future of the ½-hp. unit appears to be in the through-the-wall type of applications, he remarked.

Claiming that 208-230 v. window air conditioners will be "a minor part of the market," Komroff predicted the split phase and capacitor start and run motor "will be replaced with high speed two-pole motors."

Today, he continued, 10 parts of a window unit which formerly required 20 lbs. of steel plus finishing time, "is now being made out of 7½ lbs. of plastic with no extensive finishing time needed."

Utility Reports Area Dealers Central Unit Sales Doubled In '56

WICHITA, Kan. — Appliance dealers in southeastern Kansas sold 614 central system air conditioners during 1956, more than doubling their sales of 1955, the Kansas Gas & Electric Co. reported recently.

At the same time, the dealers in the utility's territory sold 7,760 room air conditioners, a 3.4% increase over the preceding year.

For 1956, their sales of electric clothes dryers jumped 21.6% while gas clothes dryer sales dropped 14.6%. Electric units outsold gas by a ratio of six to one.

Garbage disposer sales gained 17%, home freezers 8.6%, automatic washers 8.5%, dishwashers 5.7%, and electric ranges 2.3%. Refrigerator sales slumped by 6.3%, conventional clothes washers by 13.9%, and ironers by 20.9%.

To the utility's approximately 150,000 residential and rural customers, the dealers sold 8,562 refrigerators, 2,988 home freezers, 4,504 electric clothes dryers, 4,509 electric ranges, 11,346 automatic washers, 2,507 conventional washers, 377 ironers, 1,093 garbage disposers, and 536 dishwashers.

Weber Omits Dividend

LOS ANGELES — Weber Showcase & Fixture Co., Inc. has omitted its dividend on common stock for the first quarter.

For more information about products advertised on this page use Information Center, page 66.

Says Contractor Needs Efficient Management To Survive

Overhead Covers Fixed, Fluctuating Items Not Directly Allocated

MIAMI BEACH, Fla. — "If your overhead does not get into your estimate, it will not get into your bid, and if it isn't in your bid, it won't get into your income," warned C. C. Morris of the Florida Institute of Certified Public Accountants.

Addressing the Refrigeration & Air Conditioning Contractors Association at its annual convention in the Balmoral hotel here, Morris added, "failure to understand and recognize the fact that the contract obtained must cover all of the direct costs and overhead plus a reasonable margin for contingencies and profit, is asking for it —and it won't be long delayed."

Using Flat Percentage 'Shows Little Knowledge'

Morris indicated that the practice of using a flat percentage of direct cost for overhead in bidding shows little understanding of the nature of overhead.

Overhead, he explained, includes all costs of every nature incurred in the operation of a business that cannot be directly allocated to specific merchandise or constitute a direct cost of a specific contract.

It includes all sales, administrative, buying, and estimating expenses, even down to include the income tax paid on profits or earnings.

General Classifications

Overhead falls into two general classifications, he continued. One is the fixed items that are not materially affected by volume. These include rent, depreciation, property taxes, and administrative salaries.

The other is those items that fluctuate with volume such as office expense, light and power, supervisory salaries, delivery expense, and interest paid on financing.

"The effect of fixed overhead items, as a percentage of sales or contract income can vary more widely on low volumes than on high," Morris said.

'Variable Items Follow Volume Pattern'

"The variable items follow the volume pattern reasonably well though volume is not the sole control of them."

Morris continued, "With the increasing difficulty in obtaining financing, the advancing cost of money, sharper and more vigorous competition, union activity and demands, the requirements for efficient management have become imperative if the business is to survive.

"This is true in all fields, though contracting is always one of the first affected.

"To survive under present conditions, failure to maintain a program of aggressive management, efficient records, and a full understanding of the interpretation of those records, particularly overhead items, to project trends and budget expense, is to invite disaster.

"Put the finger on your accountant," he advised, "to help determine and interpret costs."

In reply to a question, Morris gave it as his opinion that liabilities should never exceed the total capital invested.

He concluded, "Determination of overhead ratios requires a great deal of analysis of accounting records. There is no magic formula for everyone.

"Each business must be analyzed and ratios developed in the light of that analysis. While such accounting services appear to be expensive, the results of a good job can save a business from going broke."

For more information about products advertised on this page use Information Center, page 66.

FLY HIGH IN '57 WITH

Westinghouse

GUARANTEED

1. BUY 20

Westinghouse Air Conditioners by April 1, 1957 and

WIN A "TWIN TRIP!"

Visit not one, but *two* of the world's most fabulous resorts! Spend sun-filled days in San Juan, Puerto Rico *plus* St. Thomas in the Virgin Islands! Or enjoy colorful Acapulco, Old Mexico *plus* the gay international life of Mexico City! Every 20 units through April 1 win you an additional Twin Trip. And, you can win Twin Trips for additional units right through August 30!

NEW WESTINGHOUSE AIR CONDITIONERS

NEW WESTINGHOUSE STREAMLINER

for those who want cooling plus beauty, too! Thinner, lower, smarter—it's just 16" thin, 19" low, styled by Raymond Loewy. In ¾, 1 HP low-amp models or 1 HP 230-volts.

NEW WESTINGHOUSE SUPER LINE

for those who want cool comfort at low low cost! Three volume-priced models operate on 115-volt house current, save on electricity, installation. Also 1 HP 230-volt models.

For more information about products advertised on this page use Information Center, page 66.

Air Conditioner
PROFIT PLAN!

2. BUY-BACK

insures you against cool weather during your peak selling season!

Lets you buy now and cash in on early-season selling without risk. No end-of-year inventory headaches. No loss of profits from late-season markdowns and carryovers. *And,* on top of this air-tight plan, you get the hottest air conditioner line in the industry! Call your Distributor now!

COVER ALL 3 BIG MARKETS!

NEW WESTINGHOUSE DELUXE LINE

for those who want a big cooling bonus! Delivers more BTU's of cooling than other leading brands, sells against any other unit made. ¾, 1, 1½ HP models.

PLUS! 2 HP "Area" Conditioner for those who want to cool 3 or more rooms or extra large areas.

PLUS! Casement Model for amazing new flexibility of installation in casement or double hung windows.

Refrigeration Specialties Division • Springfield 2, Mass.

YOU CAN BE SURE...IF IT'S Westinghouse

Heat Pump, Air Conditioning Jobs on Lines Of Florida Power, Georgia Power & Light

	Residential				Commercial			
	Central		Room Units		Central		Room Units	
Heat Pumps	Units	Tons	Units	Tons	Units	Tons	Units	Tons
1956	370	1,214	1,476	1,534	140	711	801	796
1945-56	675	2,407	2,246	2,163	498	4,503	1,741	1,570
Air Conditioning								
1956	630	2,026	5,028	4,283	532	4,318	1,516	1,362
1945-56	1,010	3,519	19,170	14,913	2,616	23,295	6,637	5,154

Heat Pump, Conditioning Sales Booming On Lines of Florida, Georgia Utilities

ST. PETERSBURG, Fla. — Sales of heat pumps and air conditioning are booming on the lines of Florida Power Corp. and Georgia Power & Light Co., judging by 1956 and cumulative installation figures just released.

A total of 1,173 central type heat pumps representing 6,910 tons were installed on these companies' lines in the period 1945 through 1956, according to Guy C. Hall, supervisor of Florida Power Corp.'s air conditioning department.

In the same period 3,987 heat pump room units, equivalent to 3,733 tons, were added.

Of the central jobs, 675 were in residences, 498 in commercial applications. Room unit heat pumps were divided between 2,246 residential and 1,741 commercial.

Straight air conditioning installations during the 1945-56 period totaled 3,626 central jobs (26,814 tons) and 25,807 room units (20,067 tons).

1,010 Central Systems In Homes, 2,616 Commercial

The central systems were divided between 1,010 residential and 2,616 commercial, while room units split 19,170 residential to 6,637 commercial.

Last year's sales of central residential systems, both heat pumps and straight air conditioning, set new records. In fact, more than half of the cumulative totals in both categories were installed during 1956. For example, of the 675 central residential heat pumps now on these companies' lines, 370 went in during 1956. Of the 1,010 central residential air conditioners, 630 were installed in 1956.

'56 Room Unit Heat Pump Sales Rose

Similarly, room unit heat pump sales boomed in 1956, more than half of the over-all cumulative total being installed last year. Of the 2,246 residential applications, 1,476 were '56 jobs; of the 1,741 commercial applications, 801 went in during 1956.

It was a good year for central commercial heat pumps as well, with 140 (of the 498 cumulative figure) being installed.

As for air conditioning, 1956 saw 532 central commercial applications (2,616 cumulative), and 1,516 room unit commercial applications (6,637 cumulative). There were also 5,028 residential room unit applications (19,170 cumulative) made last year.

For more information about products advertised on this page use Information Center, page 66.

Streamlined Operation

How Contractor Cuts Time Needed for Selling, Administration, Servicing

By George M. Hanning

MIAMI, Fla. — Phyllis Baldwin, secretary for Stuart Cooling Corp., can type up a six-page air conditioning bid proposal in 10 to 12 minutes.

Stuart's unitary equipment salesmen can gather the data for such a proposal in about 20 minutes.

How can these tasks which usually consume hours of time, be done so rapidly?

Streamlining is the answer, according to Armand Cowan, president of the air conditioning contracting and engineering firm.

Cowan firmly believes that time saved is money earned. So he does everything possible to grease the wheels of efficiency for his organization.

His salesmen, for instance, can make surveys of prospective installations with lightning speed because all possible design data for local conditions have been figured out in advance.

The salesmen carry charts giving them the correct values for all design factors. As they check the plans for heat gain factors, for instance, they can fill in immediately the values for Delta T, U, and K factors and have the proper B.t.u. gain for each area in minutes.

Single Sheet Survey Form Used

They are also supplied with a single sheet survey form which lists every item to be covered. When they get to the bottom of the page, they have included all factors. After totaling up their figures, they have the total heat gain, which is immediately converted to the size unit desired.

The other side of the survey form is divided into five blocks. Each block represents a page of the proposal. When the salesman fills in the data asked in each block, he is putting it down exactly in the order and form that it will appear in the final proposal.

Then, when he takes his sheet to the office, he gives it to the engineering department for checking. After being checked, the form is sent to the secretary for typing.

Miss Baldwin merely takes the information off the survey form and types it into the proper places in the printed proposal form. In 10 minutes the job is done and the proposal is ready for the prospect.

Price of Unit Includes Everything Needed for It

Pricing a job is made equally as simple. A table of prices is made up for each model of self-contained unit the firm handles. The price listed includes not only the cost of the unit itself, but the cost of every item that is necessary to make the installation. Included are such items as warranty, controls, vibration pad, fans, rigging, setting, cartage, start up, and service.

Similarly, if a cooling tower is needed, the price for that includes everything essential to the installation of the tower. The same goes for heating coils, air distribution equipment, piping, wiring, insulation, and other construction.

Thus, by jotting down only two or three figures, the salesman can come up with the price of the installation in quick order—and know that he has overlooked nothing.

Engineers Check Salesman's Figures

As a double check on the salesman, the engineering department is given the plans to peruse. The engineers scrutinize the plans to see if there are any unusual items or any peculiarities of construction called for that might affect the air conditioning.

If they find more than a 3% difference in their calculation of the heat load and the salesman's figures, they make a thorough double check.

"This system has worked so well," Cowan commented, "that only twice in our 10 years of operation with over 600 installations have we had to alter the size of equipment originally figured by the salesman."

The same system applies to central system estimating as to unitary equipment jobs. A different form is used for central systems and the proposal runs longer. But the same time economies are realized, Cowan noted.

Streamlining is also applied to office procedures. "For the size of office we have here, we turn out an awful lot of work," Cowan believes.

Believing that men work better when not distracted by

(Concluded on next page)

SAVING TIME SAVES MONEY affirms Armand Cowan, president of Stuart Cooling Corp. in Miami. So close at hand are everything he needs for rapid, efficient communication—telephone and intercom, dictating machine, data books—and the ever-present penquin trade-mark.

RUNNING OFF AN EXTRA blue print on the firm's blue printing machine is Marty Chutter, Stuart Cooling Corp. engineer. The machine pays its own way by saving time and increasing efficiency in the engineering department, testifies Cowan.

For more information about products advertised on this page use Information Center, page 66.

Streamlined Contractor Operation--

(Concluded from preceding page)

outside influences, the entire office space is broken up into a number of small offices. Each department, which will consist of one or two persons generally, has its own private space in which to operate.

All offices are connected by an intercommunications system so that a person in any office can talk to anyone else in the organization without leaving his desk. Signs in different offices urge, "Use the Intercom."

Miss Baldwin, the secretary, also operates the switchboard. So that she does not have to leave her board, all dictating is done by dictating machine. She types the letters and reports as she gets time.

In front of the switchboard is a peg board on which are listed the names of all principals, salesmen, and department heads. A tag after each name indicates whether that person is in the office or not. If not in the office, it tells when he will return.

Atop the switchboard are a series of file trays—one for each department head. Into these trays are placed all communications for those departments. Department heads, as they pass by the switchboard, can pick up all communications in their boxes and distribute any they have.

Blue Printer Used

To save time in the engineering department, a blue printer is used. Normally, blue printing is done outside the office. But when the company is in a rush for extra prints or needs more prints after normal working hours, the blue printer is put to work.

"We make an average of 30 to 40 prints a week on that machine," Cowan commented.

With 31 jobs in progress at the time of this interview, the engineering department also saves much searching time by coding the plans for each job and filing them according to the code number.

Then a current list of jobs and their code number is taped to the wall next to the file. At a glance the engineers, Marty Chutter, "Hank" Zibman, or Bill Newton, can locate the set of plans they need.

Service Calls Answered Within 2 Hours

In the service department, time is saved through rapid communications. It is the company's boast that a serviceman will be on the job within two hours of receiving a service call.

This is made possible, because Service Manager Edwin Alter can contact any of his 14 servicemen within 15 minutes.

Because the company handles only service contract work, with the regular scheduling of calls that this permits, Alter knows approximately where every man is at any particular time.

When a call comes in, Alter tries to reach the nearest man to the trouble by telephone. If he can't reach him by telephone, he resorts to radio.

Servicemen Carry Radio Receiver at Waist

Every serviceman carries at his waist a small radio receiving set. He is instructed to put the radio to his ear every 15 minutes, when he is somewhere that he can't be reached by phone.

To reach a man by radio, Alter calls the radio paging company. The company records the message and broadcasts it for 15 minutes. As each receiving set is numbered, the message usually reads like this: "No. 116, call your office."

Numbers are called in numerical order. When a serviceman listening in hears the broadcaster go by his number, he knows there is no message for him. If he hears his number, he responds to the message.

Cowan also saves time and energy by splitting up the supervision of his organization with his associate, Herbert D. Fink, who is secretary-treasurer. Cowan supervises all the outside departments—sales, service, and construction. Fink handles all the inside departments—engineering, purchasing, bookkeeping and accounting, and office administration.

Unitary, Central Station Sales Separated

Stuart Cooling Corp. actually has two selling departments. One sells Carrier unitary equipment, and the other sells Carrier and Trane central station equipment.

John Gladstone manages the five unitary equipment salesmen, while Cowan himself heads the three-man central station sales force.

Cowan declared that he considers the future of engineering firms such as his to be in the central station field rather than in the unitary equipment field.

Engineering service—the most important product he has to sell—is more needed in central station work, he believes, as unitary equipment has more and more of the engineering built into the package at the factory.

At the present, however, his business is pretty well balanced between the two. The unitary department accounts for about 60% of the jobs and about 25% of the dollar volume, while the central station department accounts for 40% of the jobs and 75% of the dollar volume.

Stuart Cooling won awards for selling $100,000 worth of packaged air conditioners for Carrier in 1954 and 1955. He felt sure that the company would repeat again in 1956.

Penguin Is Trade-Mark

Proud of the quality of his engineering service, he asserted that Stuart Cooling is one of three air conditioning firms in the Miami area on the approved list of all consulting engineers in Dade county.

Adopting the penguin as a trade-mark, a picture of that bird tied directly into the company name appears on every piece of paper that goes out of the office. It also appears on company trucks and in all company advertising. After 10 years, it has gained considerable recognition and acceptance in the Miami area, Cowan feels.

Though residential air conditioning is a growing market in this south Florida area, Stuart Cooling is doing a gradually declining business in this field.

Why?

"We can't get into the speculative home building field because of the price situation. There the emphasis is on cutting corners to get the equipment in for a price," Cowan explained.

"In the smaller custom-built home field, the job requires too much supervisory time to make it pay. So we have concentrated in the larger custom-built home, where we can do a quality job at a reasonable profit."

Is 'In-the-Wall' Room Unit Better Way To Air Condition Multiple Dwellings?

Low Initial, Maintenance Costs; Individual Control, Metering; Easy Removal Among Advantages

Is the "in-the-wall" room air conditioner the better way to provide air conditioning for the apartment house and other multiple-dwelling type of building, and if so, what are its advantages, and also some of the problems involved in the installation and operation of such units?

This subject was given a thorough airing at the Air Conditioning Conference held during the semiannual convention of the American Society of Refrigerating Engineers in Boston. J. D. Loveley, vice president in charge of engineering, Airtemp Div., Chrysler Corp., was chairman of the conference, and participants included R. A. Beam, national sales representative, commercial sales, General Electric Co.; Paul C. Wyckoff, chief engineer, Airtemp Div.; and John B. Soule, manager, commercial heating-cooling systems, American Radiator & Standard Sanitary Corp.

Wyckoff made these points as the principal benefits of the in-the-wall conditioner, which are designed with separately installed sleeves which can be mounted in the building under a window at time of construction, or through an opening which can usually be made in the wall of an existing building without too much difficulty:

- Lower initial cost for air conditioning apartment buildings and similar buildings.
- Lower maintenance costs —plug-in feature permits easy removal for service.
- Individual room temperature control.
- Air conditioning provided for wet-heat systems. For example.

(a) Baseboard radiators with unit placed below windows and above baseboard.

(b) Perimeter console heating coil units with slide-in air conditioning system.

PANEL at ASRE conference which discussed the advantages of "in-the-wall" room air conditioners in many types of applications, and correct methods of installing these units. Standing is the conference chairman, J. D. Loveley, vice president in charge of engineering, Airtemp. L. to r. seated are R. A. Beam, General Electric; John B. Soule, American Standard; and Paul C. Wyckoff, Airtemp.

- Fresh air supply easily obtained.
- Flexibility in sizing and application; cooling may be in use on one side of a building and not on another.
- Pre-selling of air conditioning provided. The installed sleeve is a reminder that air conditioning can be easily added.
- Removal or addition of air conditioning with change of tenants is easily arranged.
- No window washing hazard or blocking of window area.
- Failure of one unit has no effect on the rest of the system.
- Power consumed by individual tenant can be directly metered to him.

'Sleeve' Seen as Key To Public Acceptance

In Wyckoff's opinion, one of the major keys to acceptance and success of the in-the-wall unit is in the design and installation of the sleeve which holds the air conditioning system chassis.

The holes which have been cut to receive the sleeve become a permanent feature of the building, and cannot practically be changed at a later date. The sleeves which are placed in these openings must be as permanent as the rest of the building structure.

These sleeves must be galvanized for corrosion protection. They must be water tight to prevent any possibility of water seepage into the building structure. It is Airtemp's belief that the manufacturer should furnish the sleeves so that they will be matched properly to the chassis.

The units must also be quiet —again because they are a permanent part of the building design, and there must be no question about their acceptability to all types of tenants over the years.

Because sleeves may be placed in a building, and no chassis installed for years, provision must be made to keep them clean and free of debris. Airtemp recommends that the sleeves be installed capped at both ends. This makes them rigid during installation, and free of construction materials.

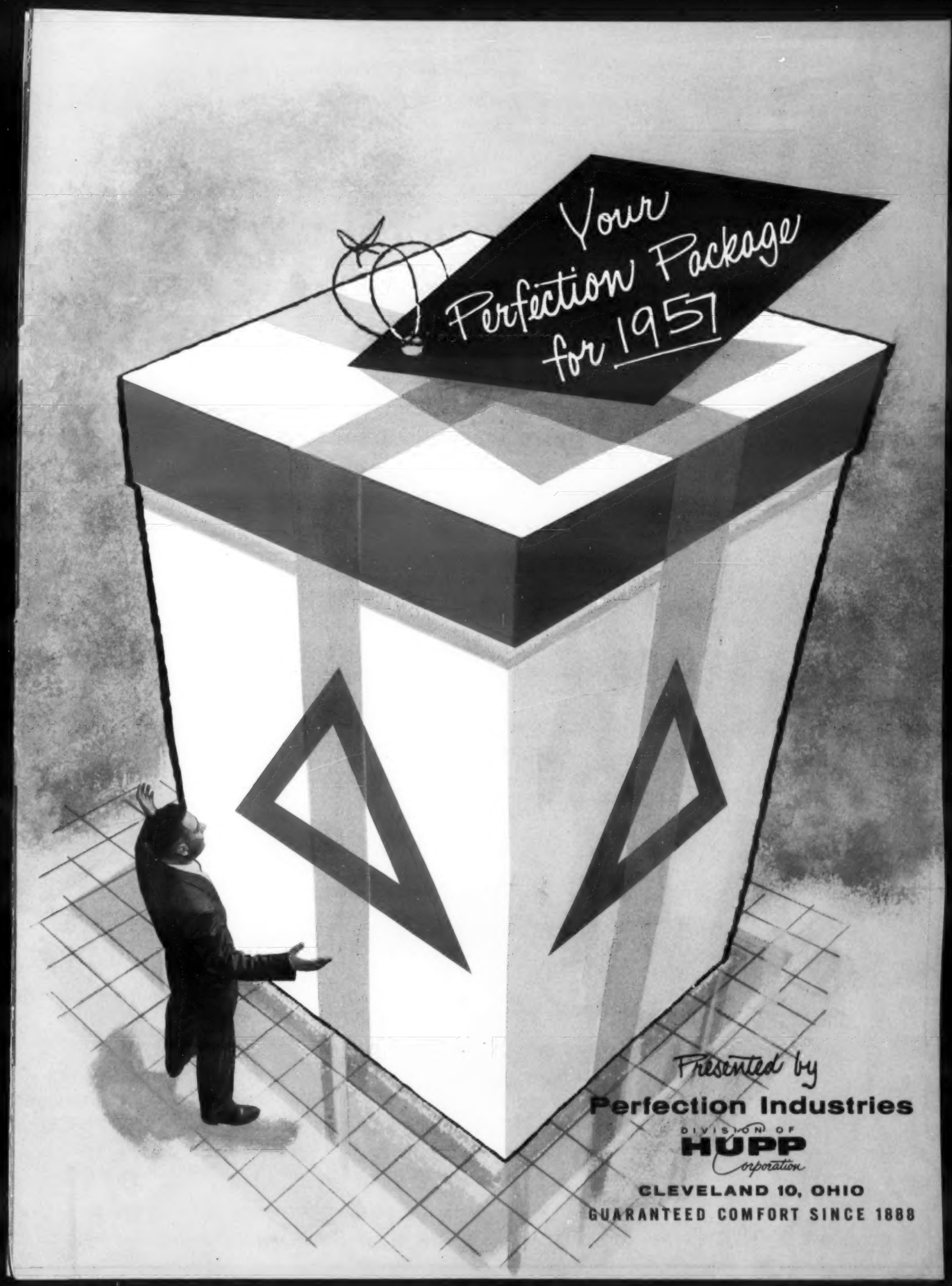
Ease of Installing In Existing Building Cited

The point that the through-the-wall air conditioning unit with integral heating coil makes it possible to install an up-to-date air conditioning system in an existing apartment house, hotel, or similar multiple-dwelling structure, with no loss in revenue, was emphasized by Soule of American Standard. Soule also summarized some of the other advantages as follows:

The installation cost can be significantly lower than with a central plant type air conditioning system, particularly for

(Continued on Page 33)

For more information about products advertised on this page use Information Center, page 66.


Your
Perfection Package
for 1951
Presented by
Perfection Industries
DIVISION OF
HUPP
Corporation
CLEVELAND 10, OHIO
GUARANTEED COMFORT SINCE 1888

America's finest line of home heating and

Nineteen basic types—53 different models—to meet every home heating requirement—that's the Perfection warm air furnace line for 1957.

There are basement Low Boys, High Boys, Counterflows, Tuckaways, Ranch House, Duct and Gravity models—models to fit every pocketbook.

There are gas-fired and oil-fired furnaces and furnaces adapted for L.P. gas—models to suit every size and kind of city, village and rural home.

Heading the line are 21 De Luxe models with Regulaire—the finest warm air furnaces that your customers' money can buy. 32 Standard models, each with outstanding selling features that make them appeal to home owners and builders, meet competitive prices and at the same time give more for the money.

Every Perfection furnace is well designed, soundly engineered and ruggedly built—fabricated of finest materials to last a lifetime and give enduring satisfaction. It is made by an independent manufacturer who sells exclusively through wholesalers and guaranteed comfort dealers. In an industry where a publisher's survey shows that manufacturers change channels of distribution every three years, Perfection is unique in that the average "life" of its distributors is 13 years.

There's profit in Perfection for 1957—profit in dollars for you, Mr. Dealer, and profit in comfort for your customers.

Sure salesmaker... famous REGULAIRE®

Explain the benefits of Regulaire to any prospect and you clinch a sale.

Regulaire is the wonderful automatic heat control used on all Perfection De Luxe Furnaces. It's a simple bi-metal coil that operates the shut-off vane at the blower. As the Regulaire coil warms up it opens slowly; as it cools it closes the damper—gradually. Entirely automatic! Always sure! Nothing ever to get out of order!

The benefits to the furnace owner are obvious. There's no cold rush of air when the blower starts up. Never a hot blast! Heating is by a constant, gentle flow of warm air that distributes comfort uniformly from floor to ceiling of every room.

Regulaire is a benefit you can see and sell.

Only Perfection has REGULAIRE

PERFECTION...The great independent who sells exclusively through

air conditioning equipment

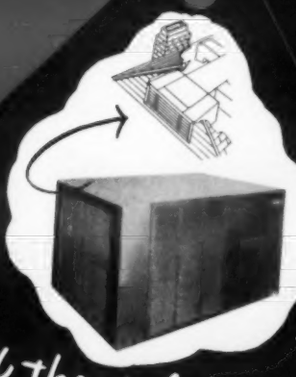
Air conditioning "comes of age" with 1957 Perfection systems

Yes, the growing pains are over. Years of trial and error by the industry, experimenting and guessing—to develop simple, practical and reasonably priced systems for every type home air conditioning—are past.

And Perfection has the most complete line in the industry. Every Perfection air conditioner is strictly a quality unit. There is nothing cheap in construction—no skimpy or undergrade materials, no make-do engineering. As a result *every* Perfection air conditioning unit is guaranteed to measure up *fully* to rated capacity.

Headed by Perfection's new, compact, completely packaged horizontal unit, the Tuckaway with honest ratings of 18,000, 24,000 and 36,000 BTU, Perfection presents units from 1½ through 5 full tons, in both deluxe and standard series. Water-cooled air conditioners in 2 through 6 tons. The Perfection Line of residential cooling equipment includes units to match Perfection and other heating equipment for year-round comfort as well as separate air conditioning systems . . . units that can be used with any warm-air furnace or with their own duct work.

Sell Perfection—the air conditioning that gives full tonnage—never skimping on rated capacity. Your customers get all they pay for—with a bonus in lower maintenance, longer life and unlimited comfort.



To lead the sales parade— THE TUCKAWAY

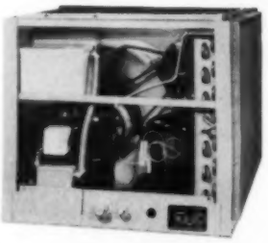
Here's the unit that's to be the best seller of 1957—the Tuckaway. Compact and self-contained like a window cooler, this unit can be installed in an out-of-the-way place anywhere—under the eaves in the attic, on the roof, in the utility room, or in crawlspace under the house. No plumbing, no extra wiring. Ductwork can be simple—overhead, in walls, under floors. Or use present warm-air ducts.

Tuckaway provides all the benefits of the biggest, most expensive air conditioning system—adequate cooling, dehumidifying, filtering, ventilating, circulating air.

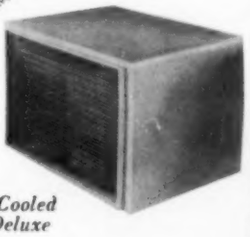
With Perfection Tuckaway, year-round comfort is here for everybody—new home or old—at a price everybody can afford.

Water-Cooled Residential

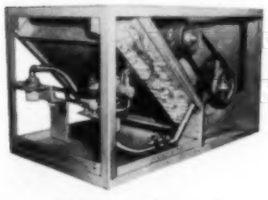
"V" Coil for use with Furnace Blower



Cut-away—3 Ton Deluxe

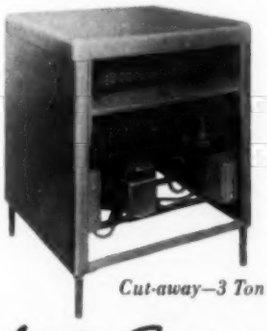


3 Ton Air-Cooled Remote Deluxe

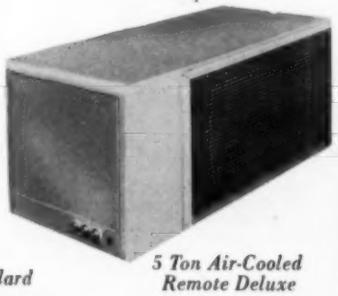


Deluxe Residential Blower and Cooling Coils

3 Ton Standard Remote



Cut-away—3 Ton Standard



5 Ton Air-Cooled Remote Deluxe

Guaranteed Comfort Since 1888

wholesalers and their carefully selected certified dealer-contractors

ROOM AIR CONDITIONERS... the types that buyers want

These Perfection units are the plug-in window types. They do a complete air conditioning job for a single room —cool, dry, filter and circulate air in an average-size bedroom, kitchen, living room, small shop or office. Larger units will cool several rooms.

The Super-Cooler 30—a 30" deep unit—is designed for easy mounting on the sill and brackets outside the window.

The Silhouette Seventeen, just 17" deep, in 2 models, rests entirely in the window or other outside wall opening, with no protruding extension.

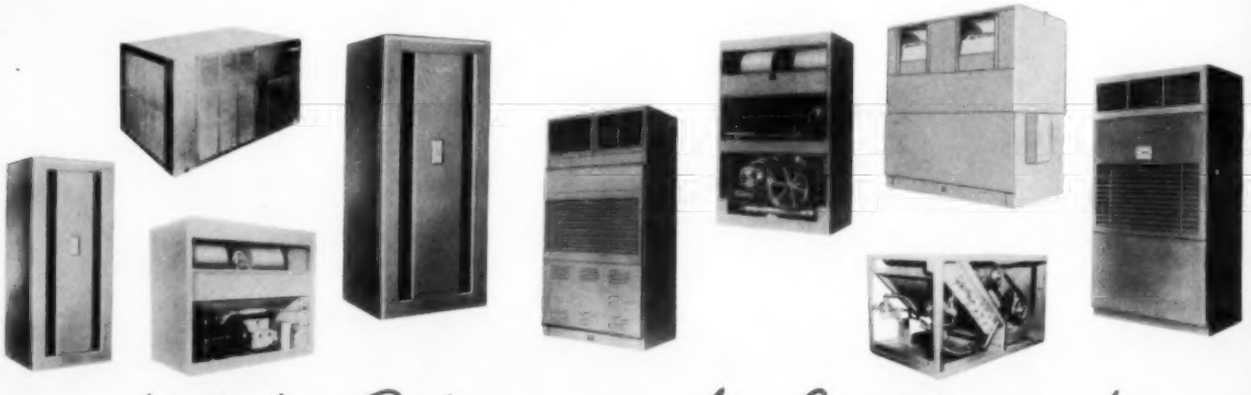
Installation is quick and easy—no fuss or muss to disturb the house. No plumbing connections. Competitively priced, you can sell Perfection Room Air Conditioners for business as well as residential summer comfort.

and rounding out the Perfection line—to bring you GREATER PROFITS IN '57

HEAVY DUTY UNITS... to help you cash in on commercial markets

Perfection Commercial Air Conditioners are of two types—air-cooled and water-cooled. Water-cooled units are offered in 10 sizes, ranging from 2 tons to 40 tons; air-cooled in 5 sizes from 2-ton to 10-ton units. BTU capacities range from 24,000 to 480,000 per hour.

Every Perfection unit is priced to compete with other high quality air conditioners and is guaranteed to deliver full performance at its rated capacity.



Look for Perfection in Air Conditioning!

PERFECTION... The great independent who sells exclusively through

THE PERFECTION HEAT PUMP... for home owners with the forward look

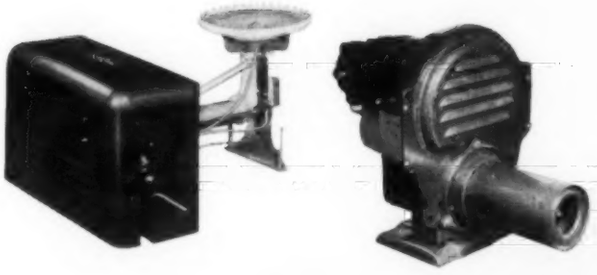
Heat pumps are out of the dream stage and thousands of Perfections are in use all over the country, from Wisconsin to Florida, New England to California.

The Perfection Heat Pump is soundly engineered and proven efficient, economical and dependable. Using only water and electric current to operate, it ends fuel bills—provides winter heat and summer cooling in a compact single machine.

There are sure to be some home owners in your vicinity who will want heat pumps. Perfection is ready to furnish them and add your customers to the hundreds of satisfied users.

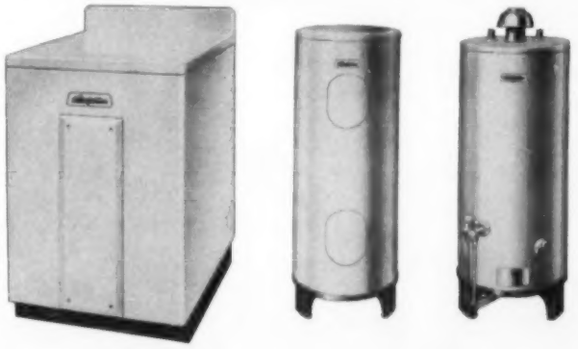
CONVERSION BURNERS... lead to new furnace sales

To the home owner who is tired of coal, ashes and grime, why not sell the comfort, convenience and economy of automatic heating with gas or oil? Perfection Conversion Burners are engineered for maximum efficiency of combustion and peak heating effectiveness. Make sure the customer's old furnace or boiler is in tiptop shape before installing a conversion burner. Otherwise he is a prospect for a new furnace.



WATER HEATERS... for extra dollars when you put in new heating systems

In the Perfection line are 28 water heaters —12 gas-fired, 16 electric—including several glass-lined and porcelain finish models. All are automatic, storage type, ranging in capacity from 20 to 82 gallons. Recovery rate is rapid. Each type has numerous special sales features. Strictly a quality line for the home owner who likes Perfection high values. Every Perfection water heater is backed by a written guarantee.



Look for Perfection in Home Comfort

wholesalers and their carefully selected certified dealer-contractors

Making the famous name

Perfection

even better known with

NATIONAL ADVERTISING

To help you increase your share of the new home market

Perfection furnaces and air conditioning equipment are advertised in leading national magazines read by home builders, residential architects, prefabricators, FHA directors, mortgage bankers, real estate men and others concerned with the building of new homes. These publications include House and Home, American Builder, Practical Builder, Small Homes Guide and Home Modernizing, which blanket the mass housing industry.

Every Perfection advertisement sells Guaranteed Home Comfort, emphasizing the idea that a dependable heating and air conditioning system by Perfection adds measurably to the market value of any new home, as installed only by Perfection certified dealers.

This advertising is creating a favorable climate for your sales approach to your local builders and developers.

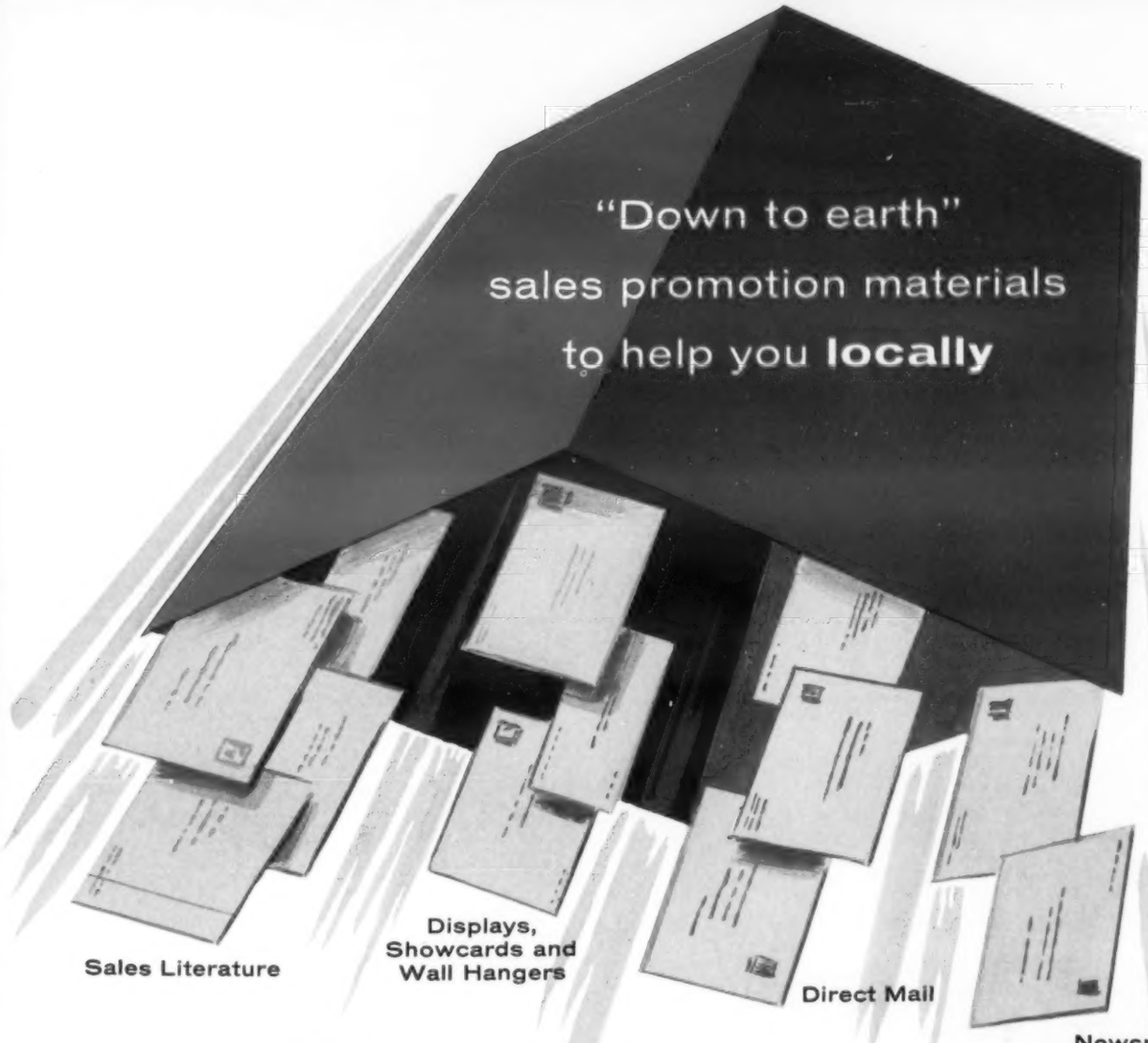
AND REMEMBER — *Builders buy Perfection equipment through Perfection certified dealers exclusively.*

To arouse the interest of home owners everywhere in replacing old equipment with new Perfection

Perfection year-round air conditioning equipment — heating and cooling — has been advertised for years in national consumer magazines. Publications that are read by millions of home owners when they want ideas on home making and home improvement — Better Homes and Gardens, American Home, House Beautiful, House & Garden and Living for Young Homemakers.

Perfection advertising acquaints this vast audience, concentrated among home owners whose incomes average well above $5,000 a year, with the superior values and benefits in Regulaire Furnaces, Air Conditioners and other Perfection products, sold, installed and serviced by carefully selected experienced local heating and air conditioning contractor-dealers.

PERFECTION...The great independent who sells exclusively through



Radio and TV Announcements
Movie Films • Telephone Directory Listings
Transportation Advertising (bus or street car)
Billboards and Outdoor Signs • Home Shows and Fairs

Backed by a liberal

MATCH DOLLAR

co-op plan to help you do a more effective local advertising job

All Perfection products share in the co-operative advertising program for 1957. And practically all forms of local advertising and sales promotion are eligible. Your Perfection wholesaler has all the details. He is ready and eager to sit down with you to work out a strong program to identify you and establish you as a Perfection dealer in your community.

wholesalers and their carefully selected certified dealer-contractors

PROMPT SERVICE

when you want it from a nearby Perfection wholesaler

You are as near as your telephone to a progressive, co-operative Perfection wholesaler.

He has an excellent, well-balanced inventory of furnaces, air conditioning equipment, conversion burners, water heaters and Perfection accessories, in addition to all other related items you need in your business. Thus your Perfection wholesaler can fill your orders promptly, accurately and dependably. A one-stop source.

He can serve as your business counselor—advise you as to which Perfection models are best sellers in your market, which ones to stock, which to draw from his inventory. He can guide you to successful methods of selling the new home market—how to approach FHA and VA officials, mortgage bankers and other key factors.

Your Perfection wholesaler and his men know Perfection features and will gladly teach you and your crews how to make the most of these sales advantages.

Your Perfection wholesaler will help you map out a sound program of local advertising and sales promotion, to take full advantage of the 1957 co-op MATCH DOLLAR plan. It is designed to help you become established as a leading contractor-dealer on the Perfection line, thereby selling more equipment and making more satisfying profits.

It's time now to join the winning team with the winning line for 1957—YOU, the Perfection dealer—your Perfection wholesaler—and your manufacturer, Perfection Industries, producers of guaranteed home comfort equipment since 1888.

REMEMBER—Perfection is the independent manufacturer who sells exclusively through wholesalers and guaranteed comfort dealers. Your Perfection wholesaler and your manufacturer are ready to serve you

NOW...
TOMORROW...
AND TOMORROW

Perfection Industries

DIVISION OF HUPP Corporation

1135 Ivanhoe Road
Cleveland 10, Ohio

GUARANTEED COMFORT SINCE 1888
GUARANTEED QUALITY IN 1957

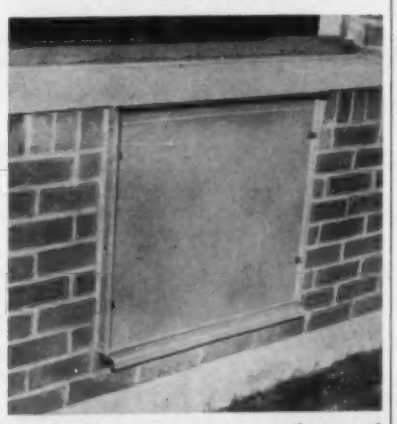
Installation Pointers For 'In-the-Wall' Room Units

STUCCO, BRICK or any other kind of building exteriors yield readily to the modern tools which are used to cut the opening to hold the "in-the-wall" room air conditioner sleeve.

KEY TO successful application of the in-the-wall unit is the sleeve which holds the chassis. It must be done correctly right from the start; later alterations can be costly.

WEATHERPROOFING of the opening is a "must" to deter any customer disatisfaction that could hurt future sales of such units.

INTERIOR SEAL is also important, and installers should make use of best materials for such purposes. Everything must also be done to keep the operating noise level at a minimum.



OPENINGS may be cut any time, and capped in this fashion to await installation of air conditioner chassis at a later date, without distorting building appearance.

Cooling Multiple Dwellings--

(Continued from Page 24)

modernization projects.

Extremely flexible operation is provided for either heating or cooling. Such a system is an effective solution to the problem of intermediate season operation.

It offers the flexibility of converting part of a building at a time to full air conditioning. Thus the size of the program can be tailored to annual budget requirements.

Operating Engineer Not Necessary

While the through-the-wall unit may require some special electrical power facilities, such installations do not require a special machine room or operating engineers, and there is no danger of big loss or inconvenience through total plant failure.

Since the units can be installed in one apartment or section at one time, the owner of the building can tailor the size of his air conditioning program to his annual budget requirements.

The integrated through-the-wall air conditioner unit becomes a part of the new or remodeled building design, with no projections beyond the building line.

More People Can Afford $300

There are so many more people who can afford to spend $300 than there are who can afford to spend $1,500 or $2,000 at any one time in their economic lives, Beam said in discussing the market factors. The room air conditioner business basically offers the vast majority of the people within this country something that might be likened to buying a Cadillac piece by piece and part by part; the rear wheels this year, the front wheels next year, the body the following year.

There is one major difference, however, in that this product can be used immediately after the first purchase without waiting for the entire assembly, plus the fact that benefits received at the time of the first expenditure are exactly as great within their noticeable area as they are if the complete house or apartment were air conditioned instantaneously.

Existing Building Market Seen Greatest

Another important element of this marketing picture is the fact that there are more dwellings and multiple dwellings currently in existence in this country than will be built during the next few years. And the nice part about it is that most of these dwellings are without the benefits of air conditioning. Here is a product that fits both the old and new providing for satisfaction of individual preference and permits installation either on a complete or a gradual process suited to the economic ability of the purchaser.

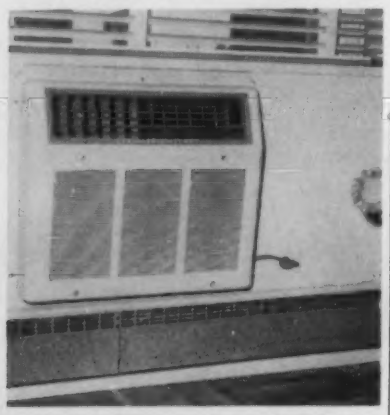
"Where the general room size is not in excess of 30 ft. from the outside exposure and there is sufficient outside exposure it is my opinion that the job can be done more efficiently and more satisfactorily with the individual room air conditioner, both on the original installation and from the standpoint of maintenance and comfort derived," Beam declared.

An air conditioning system is an operating piece of machinery, he pointed out. It can be

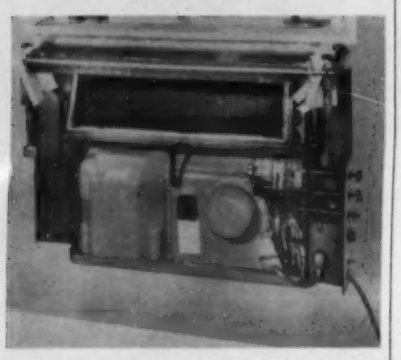
(Continued on next page)

'In-the-Wall' Room Unit Pointers

OUTSIDE VIEW of opening for completed installation of in-the-wall room air conditioner in a single residence having exterior construction of brick. Attractive grillwork does not detract from appearance.



INSIDE VIEW of completed installation in New York City apartment shows in-the-wall unit ready for summer cooling operation, and finned baseboard convector to handle the winter heating load.



YEAR-ROUND air conditioning is available through this combination. The in-the-wall chassis slides into the special sleeve, with heating coil above it. Thus this system provides year-round air conditioning, but the chassis can still be slid out for easy servicing.

Cooling Multiple Dwellings--

(Continued from preceding page)

capitalized and amortized over a fixed period of years, but the important part about it is that it can pay for its investment completely within these years and at a fair rate of return, over and above its cost of operation, acquisition, and maintenance.

With the room air conditioner again, this job can be done on a gradual basis, in a multiple dwelling system. There is no loss of tenancy because of torn up walls or floors.

There never has been a complete failure of the cooling units in a multiple dwelling. There is an opportunity on the part of the user to have as little or as much air conditioning as he or she may desire.

In Louisville, Ky., over 100 units are installed in the office portion of a major manufacturing plant. One day at a temperature of 70° F. better than 50% of the units were operating, the others were not operating. An inspection of the offices from the inside showed that those units which were operating were performing and delivering a wide variety of benefits.

In the offices tenanted by cigar smokers the units were on exhaust. Some other units were on ventilate. Other units were on cool vent, and other units were on maximum cooling positions.

There was no dissatisfaction among the hundreds of people who were enjoying these benefits. Each of them had the opportunity to control on a zonal basis the kind of climatic condition that he or she desired. There was no problem in balancing the system and this entire operation is run without the benefit of a Stationary Engineer in attendance at all times.

Sees Smaller, Easier To Install, Service Units

Beam sees the individual air conditioner becoming smaller, easier to install and easier to service, with its service life lengthened appreciably and its over-all cost of maintenance comparing favorably with the electric refrigerator.

New materials and new processes will make available an air conditioner that will better withstand the onslaughts of wind and weather. New features will be added and not the least of these will be the feature of heating by the heat pump method.

Special Elements, Problems Involved

Some of the special elements and problems involved in the installation and operation of through-the-wall units were brought out in the formal discussions, and also in questions and discussions by members of the audience.

Most of the manufacturers of such units provide a one-piece cabinet sleeve to hold the components for the system. One problem is that the opening through the wall in which the sleeve fits must be made watertight.

One provision for proofing was described in terms of a plastic pan set in water-proof mastic with provisions for the evaporation of wind-driven snow or rain.

Cooling condensate is usually removed by means of the sump and blower slinger-ring arrangement which is common on many room air conditioner units. If heating is done with steam, some form of a steam condensate drain is vital.

It was stated that it is desir-

(Concluded on next page)

For more information about products advertised on this page use Information Center, page 66.

Cooling Multiple Dwellings--

(Concluded from preceding page)

able to install the cooling system, so that the principal components can be withdrawn from the casing without disturbing the heating system components.

If Window Sill, Line Too Low, Installation May Be Impossible

Where the window sill or window line is lower than normal, installation of through-the-wall units may be a problem, or even impossible. Most window lines are 25 in. from the floor level, which is fine. About 22 in. from the floor is the minimum height than can take a through-the-wall installation.

Most such units can be adapted for front or top discharge of the conditioned air.

Question was raised as to whether or not the room units might not cause unpleasant effects through the direct throw of the conditioned air upon the occupants of the room.

This problem can be met in a variety of ways, it was explained, either through vertical discharge of the air, or by use of deflector vanes in the discharge grille.

The control of the operation of the through-the-wall unit brought out some of the liveliest discussion, and also seemed to be the phase in which there is the most confusion, and possibly an area in which considerable improvement might be made.

Thermostatic control is generally provided, with the heating and cooling cycle on separate thermostats, and the blower cycling on any call for heating or cooling.

Thus far, there seems to have been little provision made for automatic change-over from heating to cooling or vice versa. This brought up the question of what happens in such localities or such time of the year that wide swings of outdoor temperature conditions may be experienced in short periods of time.

(One discussion from the floor brought up the point of a tenant who may leave on a "long weekend" and return to find outside conditions radically changed, with his controls set for opposite conditions).

Another made the point that since such installations must be considered as "permanent jobs" they should have complete controls. Some representatives of control manufacturers pointed out that control systems with changeover features are available—if installers and the public will pay a slightly higher price.

Another problem in controls develops in those installations where heating is provided by steam. The problem is whether the steam will be going through the coil at all times, with the thermostat controlling the blower operation only, or whether some sort of a steam shut-off control is desirable.

Another part of the discussion touched on the future of other types of heating—such as electric resistance heating, or the heat pump, or a combination of both — in relation to the through-the-wall units.

Beam declared that General Electric's "All-Weather" room air conditioner operates on a heat pump cycle until the outdoor ambient drops to 42° F., at which time resistance heating elements automatically go into operation.

It is said the very fact that the unit is "in the wall" tends to lower the noise level, and this plus improvement in fan construction and sound insulation methods tends to minimize this objection.

UsAirco Merger Plan Advances $900,000 For Debt Payments

PHILADELPHIA — United States Air Conditioning Corp. reported a substantial loss for its fiscal year ended Oct. 31, 1956 and said it had reached an "informal agreement" on a merger.

Losses of $972,922 for 1956 were disclosed in the company's annual report on sales of $11,-105,565, compared with a deficit of $810,022 on sales of $6,857,-252 in fiscal 1955.

ATTRIBUTES DEFICIT TO JORDON PURCHASE

David E. Feinberg, president, said in a letter to stockholders, "The deficit may be substantially attributed to our purchase and operation of Jordon Refrigerator Co. and the heavy, non-recurring charges resulting from the sale of our plant in Minneapolis and removal to Philadelphia."

He asserted UsAirco has entered into a transaction "which, it is believed, will provide the company with financial security and a truly bright future." The first step in what was described as "an informal agreement," Feinberg added, "has involved advances to U.S. Air Conditioning of over $900,-000."

These funds have been used in part, the executive said, to pay off all indebtedness to finance companies "with their accompanying heavy interest burden." The advances, he continued, are part of the agreement "whereby it is proposed to merge the two companies." As of Oct. 31, 1956, UsAirco's balance sheet showed debts to finance companies amounted to $1,114,226.

Although he wouldn't expand on the merger statement, Feinberg announced on Feb. 18 that the company's directors agreed to merge with Hughes-Keenan Corp. of Delaware, Ohio, a maker of truck bodies and other products. The announcement gave no details except for the statement that the transaction would involve an exchange of stock.

TO ELIMINATE FIRM'S PREFERRED STOCK

Feinberg's letter said one condition of the proposed merger will involve elimination of UsAirco's preferred stock with its arrearages through an exchange into the common stock of the proposed company. If the merger is accomplished, he claimed the firm would gain $4 million in assets and "substantial earnings before taxes."

UsAirco's Jordon Refrigerator subsidiary is in the process of liquidation "on a basis believed to be favorable," Feinberg told stockholders, Jordon, acquired in January, 1956, asked its creditors last December for an extension on its debts, it was reported.

"With respect to the Oct. 31, 1956 balance sheet, all known expenses and charges accruing from the Jordon operations and/or acquisition have been taken," Feinberg explained. "No further advances or funds, it is thought, will be necessary to go from UsAirco to Jordon."

ARI Newspaper Release Urges Homeowners, Businessmen To 'Buy Air Conditioners Now' for Spring Installation

WASHINGTON, D. C.—In a release issued for use in newspapers, the Air-Conditioning & Refrigeration Institute urged homeowners and businessmen who may be contemplating the purchase of air conditioning equipment to place their orders for spring installation without delay.

It is suggested that dealers and contractors could profit by sending the release on to their local newspapers.

In the statement, Geo. S. Jones, ARI managing director, pointed out:

HOT WEATHER BRINGS SCRAMBLE FOR UNITS

"Extremely hot weather, coupled with the wholehearted public acceptance of air conditioning during the past several years, has brought about each year a scramble for air conditioning equipment as soon as the hot weather begins.

"This means that if you wait until the weather gets hot, dealers may be out of the units you desire, if you're looking for room air conditioners, or contractors may be so tied up with installations of central units that you may have to take a place well down on the waiting list."

'55 RUSH BEGAN IN JUNE

Last year, Jones noted, the big rush for air conditioners and for installations in homes began in June, when the weather was unseasonably warm in almost all parts of the country.

"While most dealers, distributors, and contractors now have good supplies in their warehouses ready for the 1957 season," he said, "the first spell of hot weather could deplete their stocks in a hurry if everybody waits for hot weather before making their purchases."

The ARI listed a number of advantages of making an early, pre-season selection of air conditioning equipment. Among them:

EARLY SELECTION ADVANTAGES LISTED

"Dealer stocks are now complete and you can secure the particular unit best suited for your purposes;

"Dealers may be more willing to sell on easy payments now than when there is a sharp demand for everything in their stores;

"You can have the unit installed before hot weather hits, and not have to suffer from the heat, due to delay in installation at a later time when dealers are rushed with orders.

"Contractors who install central air conditioning equipment are not so busy as they will be later in the season, when more homeowners decide that they don't want to spend another non-air conditioned year, and you may get a better job of installation now than later."

Institute spokesmen call attention to the fact that, whereas only about 20 companies supplied room air conditioners in 1952, there are now more than double this many brands on the market, and said:

"1. Be sure that an inspection of your premises is made by someone competent to advise the proper size and type of air conditioner to give you the most efficient operation.

"Many elements enter into the proper size and type of equipment which you should use such as the number and size of rooms, number of windows, exposure to the sun, insulation or lack of it, trees or buildings which furnish shade, number of occupants, whether for continuous use or only part of the day or night, and many other factors.

"2. Check into the electrical wiring system to be sure that it is adequate to handle the additional load of the air conditioner.

"3. Be sure that the firm from which you purchase your air conditioner is reliable and can be counted upon to furnish the proper installation and service of the equipment."

At the same time, Jones pointed out that most of the makers of room air conditioners this year are publishing the capacity ratings of their products in terms of "British thermal units," which, he said, gives the prospective purchaser a realistic basis of comparison in the area of capacity, since the B.t.u. ratings are based on testing procedures based on a single standard, known as ARI Standard 110-56.

The B.t.u. ratings, he said, provide a more understandable yardstick of capacity than the previously used designations of "tons" and "horsepower."

Charter Firm

HAZARD, Ky. — Godbey-Kinder Co., Inc., has received a charter for selling, installing, and servicing electrical, air conditioning, and refrigeration appliances and equipment.

For more information about products advertised on this page use Information Center, page 66.

Blake Thomas Resigns Post as McQuay Vice President; Will Stay in Industry

MINNEAPOLIS — Blake Thomas, executive vice president, general sales manager, and director of McQuay, Inc. and director of American Automatic Ice Machine Corp., announced his resignation as of March 5.

Starting in the industry with American Radiator Corp. in 1926, he joined McQuay in 1947. He represented McQuay for many years with the Unit Heater Manufacturers Association and served on several government committees, it was pointed out.

For three years Thomas was a director of ARI and chairman of the heat transfer section. He is a past president of Heating and Cooling Coil Manufacturers Association.

Thomas stated that he plans to remain in the air conditioning industry.

Newest Rust-Oleum Addition is Cooled

EVANSTON, Ill.—Completely air conditioned throughout, newest plant addition to Rust-Oleum Corp. includes 11,000 sq. ft. of office space in the administrative buildings and 10,560 sq. ft. of space added to the manufacturing plants of this producer of rust preventive products, it was reported here recently by the manufacturer.

Row on Duct Installation, Failure To Get Rental Plan, Delay Auditorium Cooling

LINCOLN, Neb.—A mixup in air conditioning plans and interpretation of such plans for the new Municipal Auditorium has caused headaches for air conditioning contractors as well as the Auditorium Advisory Committee, it was disclosed here.

Confusion over the meaning of one sentence in the auditorium contract may lead to court action, the report explained.

Industrial Sheet Metal Co. of Omaha, which sub-contracted the installing of air conditioning ducts in the auditorium basement from Natkin & Co., commercial air conditioning firm of Lincoln and Omaha, interpreted the sentence one way. The firm contended the contract specified the ducts were to be lined only a distance of 10 ft. from the air units and fan housings.

Auditorium architects interpreted the contract another way. They notified the Omaha company it had to line all the ducts with a sound deadening material.

The firm followed the architects' orders. But company representatives appeared before the Lincoln City Council in an effort to get authorization for full payment for the job. Additional cost of supplying full lining was estimated at $18,000.

The council took no action but decided to wait for the filing of a claim. City Attorney Jack Pace will then rule on the claim and the council will schedule another meeting with the contractors.

The sentence causing all the trouble reads:

"All ducts for a distance of 10 ft. on supply and return connections from air units and fan housings, all fan housings, coal housings, all chilled air supply ducts, and all fresh air ducts shall be lined on inside."

Lincoln Architect Walter Wilson admitted it was difficult to tell whether the sentence had one or several subjects.

Meanwhile, the auditorium manager and advisory committee have been asked to make a recommendation on the purchase of air conditioning equipment for the building.

Bids on a 500-hp. system were turned over to auditorium officials by the City Council after architects said the low bid of $65,094 by York Co. did not meet specifications. They recommended the next lowest bid of $69,485 by Natkin & Co.

None of the bidders submitted a rental-purchase plan, however, and the city doesn't have the cash for outright purchase.

Councilmen discussed the possibilities of advertising for new bids and to ask for a definite time payment plan, or to reject all bids and not buy the unit at this time. Ice-making equipment for the skating rink already has been purchased and installed.

The auditorium advisory committee, however, "strongly urged" the purchase of additional air conditioning equipment for the new building. Auditorium Manager Don Jewell declared that it was not possible to determine the loss of revenue by not having the equipment for the arena, but that the purchase of 500-hp. machinery would help attract groups to the building.

Councilmen agreed with the committee's stand, but declared funds for the purchase are not now available.

TRANSPARENT Plexiglas panel installed in frame above the air conditioner solves the problem of blocking off light along the entire height of the casement. This "extra" has been a successful sales aid, said Wilson Supply Co., Washing, D. C.

'Reclaims' Window Area

Distributor Spurs Casement Room Unit Sales with Plexiglas Filler Panels

WASHINGTON, D. C.— "Plexiglas" filler panels spurred sales of room air conditioners last year for the Wilson Supply Co., distributor for Chrysler Airtemp units here.

Wilson Supply noticed that some potential customers, particularly those who had casement windows or large double-hung picture windows, hesitated to buy air conditioners because they felt that the installation would block off too much daylight and darken the room.

This was especially true for the casement models, since the usual metal or fiberboard filler panel which is installed between the top of the unit and the top mullion of the window, blacks out the entire window. In wide double-hung windows, the filler panels black out the full lower width of the window.

Turns Objections Into Advantage

Wilson Supply turned these objections into a merchandising advantage by offering filler panels made of clear Plexiglas, an acrylic plastic manufactured by the Rohm & Haas Co. of Philadelphia.

With the Plexiglas panel they reclaimed about 2 sq. ft. of window area that otherwise would have been blacked out.

One In Three Ordered Panel

Although they made no special effort to advertise or promote the idea, Wilson reports that about one out of every three customers for conditioners also ordered the Plexiglas panel.

A flat charge of $10 was made for the panel, but occasionally it was thrown in as an extra to clinch a wavering customer.

Plexiglas is shatter-resistant, completely transparent (it's widely used for aircraft cockpit enclosures), will withstand any sort of weather, and will not discolor with age. It can be sawed and drilled like wood.

Easily Installed

The panels can be installed easily by regular installation crews. After the mounting holes are drilled, the panel is installed simply by screwing it directly to the window sash with wood or metal screws.

Where the sash is worn or bent, a non-hardening glazing compound applied around the edges of the panel is helpful in producing an air-tight seal.

The plastic should be cut about 1/16 in. smaller than the opening and the mounting holes drilled slightly oversize, to enable it to expand and contract with temperature changes.

Plexiglas can be washed easily with a soft cloth and plain soap and water.

Kelvinator Doubles Former All-Time High Jan. Room Unit Sales

DETROIT — Kelvinator and Leonard sales of major household appliances set an all-time January record during the past month, according to Homer L. Travis, vice president-sales.

Billings to dealers were 12% above the same month a year ago, the best previous January.

Room air conditioners, automatic washers, and clothes dryers all recorded new January highs. Room air conditioner billings were more than double the best previous January.

Although they did not set all-time records, Travis said, freezer and refrigerator sales showed important gains over the comparable 1956 period, with freezers up 35% and refrigerators up 11%.

Philadelphia Area Distributor Room Unit Sales Hit 2,812 In Jan.

PHILADELPHIA — Distributor air conditioner sales reached 2,812 units for January in this area as compared with 2,727 for the same month in 1956, the Electrical Association of Philadelphia reported here recently.

Refrigerator sales totaled 4,499 units in that month as against 5,010 for January, 1956 in Bucks, Chester, Delaware, Montgomery, and Philadelphia counties, it was added.

There were 352 home freezers sold during January as compared with 537 in the like period of the preceding year, the company said.

Clothes dryer sales rose to 2,492 over 2,312 for the same month.

THIS "Silent Salesman" has been introduced by Emerson-Quiet Kool to allow the dealer to dramatically display a line of the firm's air conditioners in less than 4 ft. of floor space. It graphically highlights the thin and low dimensions of the "Tru-Slim" model. Each shelf is adaptable for any size unit in the line and selling features for the entire line are shown.

For more information about products advertised on this page use Information Center, page 66.

Plumbing and Heating Exposition Set for Dallas June 10 to 13

WASHINGTON, D. C. — The first national convention and exposition to occupy the brand new Dallas Memorial Auditorium is the 75th annual convention of the National Association of Plumbing Contractors and the National Plumbing and Heating Exposition scheduled for June 10-13.

Approximately 82% of the available space was sold out as of early March with a further substantial demand indicated for the remaining space, according to the NAPC. A very heavy attendance from throughout the industry is indicated by the large number of requests for hotel rooms received through the NAPC Washington office.

Commenting on the convention and exposition, William A. Landers, NAPC president, said: "It is essential that the plumbing, heating, and air conditioning contractor keep abreast of the latest developments in equipment, applications, and installation procedures. In Dallas, he will have an opportunity to see a display of these new products and methods and to observe at first hand the many advances made in the plumbing and air conditioning field in the growing southwest."

Landers also pointed out that a streamlined and informative series of convention sessions has been planned along with appropriate entertainment features such as the barbecue and rodeo on "Western Night" June 11 at the Texas State Fair Grounds.

ON THE LEFT is one of the chutes used for fast merchandise handling. By its side is one of the building's seven "packaged" air conditioners. Note the excellent illumination; the full-measure of aisle space; neat and fresh stock arrangement.

No Dark, Dusty Areas In This Warehouse

HORIZONTAL gas-fired furnaces hung from the ceiling supply the heating needs of the sales warehouse. Lack of windows in air conditioned warehouse allows wall area to be used for storage.

Modern Wholesale Dry-Goods Firm Finds Air Conditioning Brings Larger Orders

COLUMBUS, Ga.—The modern new warehouse-building of Arenowitch, Inc., one of the city's major wholesale dry-goods firms, is said to be one of a few of its type and size in the country to be fully air conditioned. It is equipped with seven "packaged" air conditioners.

The building has been described as "a particularly fine example of the changes, for the better, that have taken place in warehouse architecture and interior layout."

Bearing no resemblance to the somber warehouses of earlier vintage, the new brick structure is as modern on the inside as it is on the outside.

Stock areas and merchandise are arranged to make the most effective and economical use of approximately 40,000 sq. ft. of floor space. Aisle-ways are good-size and uncluttered. Throughout the building all areas are scientifically illuminated.

AMPLE ROOM FOR WORKER TRAFFIC

Ample room is provided for worker traffic and for goods transfer. The latter activity is expedited through the use of conveyors and chutes that speed the flow of merchandise from one department to another.

The warehouse-building has a multiple-unit, water-cooled "packaged" air conditioner system. Five 11-ton Airtemp conditioners serve the sales warehouse. One 8-ton unit is used for the general office, one 3-ton for shipping and receiving.

Ceiling-suspended, horizontal gas-fired furnaces heat the sales warehouse.

REFLECTS PROGRESSIVE BUSINESS PHILOSOPHY

Building design and features are representative of the progressive business philosophy of owners Theodore and H. B. Arenowitch. The brothers long felt that a wholesale operation could profit from and should employ the same operational techniques used successfully by manufacturing and retail concerns. They especially noted that both segments were using air conditioning extensively and advantageously.

RETAILERS LINGER LONGER

The new company headquarters epitomizes their belief that a modern, spacious, well-lit, air conditioned wholesale business place would induce retail business people to shop displayed merchandise more leisurely and as a result order additional items. Columbus retailers "are doing just that," it was pointed out.

Firms associated with the construction of the building include: J. N. Pease, architect; Murphy-Pound Construction Co., general contractor; Condition Air Co., air conditioning and heating contractor.

For more information about products advertised on this page use Information Center, page 66.

Utilities' Look at Air Conditioning

Trane's Survey Among Firms Providing Electricity Reveals Growth in Various Areas, Effect on Power, Water Usage

LA CROSSE, Wis.—Substantial gains in air conditioning with predictions of consistent future growth are being reported in a survey of public utilities just completed by The Trane Co.

From responses received after querying 50 power companies and water departments in leading cities across the country, Trane has come up with these facts:

1. Every company participating in the survey reported marked increases in the installation of air conditioning in its area, as measured through tons of refrigeration on its lines.

2. The degree of increase was more pronounced in the south, but the difference between other land areas of the country was not great, indicating that outside temperature alone is not responsible for the growth of air conditioning.

3. Central air conditioning systems are becoming increasingly popular for residence applications.

4. Commercial and industrial air conditioning are becoming a competitive necessity in many parts of the country.

5. Power and water companies expect an upsurge in the use of air conditioning in the years ahead and many are making plans now to meet the increasing demand on their facilities.

One highlight of the Trane survey was the developing trend towards air conditioning in areas not normally regarded as outstanding markets because of their mild climates, it was disclosed.

Calif. Shows Increase

For example, air conditioning installations in northern and central California showed a sharp increase for 1956 over figures for 1955, according to Pacific Gas & Electric Co.

For the first eight months of 1956 industrial and commercial air conditioning equipment installed in these sections of California amounted to 7,600 hp. Projected for the entire year but taking into account the fact that air conditioning installations are normally lower during the fourth quarter, the total figure will still be substantially higher than the 9,700 hp. for 1955, it was pointed out.

O. R. Doerr, vice president of Pacific Gas & Electric, said, "Until recently, it was rather generally assumed that the San Francisco Bay area needed no air conditioning because of the relatively low summer temperatures.

Cooling in San Francisco

"Three of the newest 8 to 12-story buildings now planned for downtown San Francisco will be completely air conditioned, however; and it appears that there will be a market for commercial air conditioning in our major office buildings from now on."

Another example came from Seattle. Here, the Seattle Dept. of Lighting reported that air conditioning installations totaling 519 hp. had been made through Sept. 30, 1956. Installations totaling 428 hp. were the tops for all of 1955, the department said.

The department added, "Although the Seattle area seldom experiences excessive summer temperatures, there are many cases where the internal heat load of a building makes air conditioning mandatory. These internal heat loads are human heat loads of occupants, lighting and cooking heat, and heat of service machinery motors."

Replies to the Trane survey were made by Paul J. Raves, superintendent of lighting, and J. D. Gawne, electric sales supervisor.

Switching from the west to the east coast, the Trane survey noted trends there.

Cooling equivalent to the melting of 550 million pounds of ice daily is used in season by air conditioning equipment in New York City's Mantattan Borough.

Water Savers in N. Y.

Arthur C. Ford, New York City commissioner of water supply, gas, and electricity, reported that there were 18,527 water-cooled air conditioning units, totaling 275,218 tons of capacity in Manhattan Borough at the end of 1955.

Of the 275,218 tons, 230,942 were used with water conservation devices such as cooling towers, resulting in substantial water savings.

Eugene O. Bauman, chief of the department's bureau of water register, said the trend in the city's larger office buildings, hotels, and other commercial establishments apparently is away from window-box air-cooled units toward well engineered central systems with water conservation devices.

Plan Larger Mains

Present policy of the department is to enlarge all existing 6-in. and 8-in. mains in its gridiron distribution system to a minimum size of 12 in.

"We feel," said Bauman, "that with recirculators being used for all air conditioning and refrigeration, our water supply and distribution system will be capable of handling all water demands made upon it."

Department regulations provide that all systems of air conditioning in excess of 6 tons be equipped with a water conserving device.

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For more information about products advertised on this page use Information Center, page 66.

Utilities On Air Conditioning--

(Concluded from preceding page)

In the Baltimore area, the Trane survey revealed that air conditioning installations ran about 50% greater for 1956 than for 1955.

The estimate of 50% increase was made by the Baltimore Gas & Electric Co. It said the estimate was based on its records of horsepower installed in air conditioning installations for the first 10 months of 1956.

Sales in Baltimore

In 1955, the company said, there were 862 air conditioning installations totaling 18,572 hp. This compared with 848 installations totaling 22,700 hp. in 1954. The total of such installations, as of Dec. 31, 1955, was 6,520 with 137,304 hp. These figures did not include window air conditioners.

Self-contained room cooler unit sales were: 1955—14,884 units, 13,476 hp.; 1954—10,175 units, 8,581 hp.; total as of Dec. 31, 1955—50,855 units, 41,441 hp.

A 140% increase in air conditioning tonnage installations in the Pittsburgh area by 1965 was forecast by Duquesne Light Co., the Trane survey reported.

Picture in Pittsburgh

Duquesne Light reported that there were 87,500 tons of air conditioning capacity on its lines, including Allegheny and Beaver counties.

Of this total, 6,000 units totaling 65,000 tons were installed in commercial establishments such as stores, offices, theaters, and institutional buildings. About 13,500 tons were installed in residences. Installations of various sizes in industrial plants totaled 9,000 tons.

The company said its studies lead to a forecast of 125,000 tons of additional air conditioning by 1965.

In the midwest, the report from Chicago was typical. Here a big increase in air conditioning installations was predicted.

The Chicago Dept. of Water and Sewers estimated that through 1955 there were 255,000 tons of water-cooled air conditioning in operation in Chicago.

Chicago Checks Water

Commissioner James W. Jardine said that estimates of 560,000 tons of water-cooled air conditioning in operation are forecast by 1960 and that plans now are under study for controlling water consumption by requiring use of conservation devices.

An indication of conditions in the south can be achieved by studying typical reports from Houston and New Orleans.

In Houston, a steady increase in the installation of air conditioning equipment over the past few years was reported in the Trane survey.

The Houston Lighting & Power Co. said 1955 installation figures included 1,524 residential units totaling 6,908 tons of air conditioning capacity, 944 commercial and industrial installations totaling 19,994 tons, and 56,453 window air conditioning units totaling 58,588 tons.

For 1954, comparable figures were 1,213 residential installations totaling 5,787 tons, 835 commercial and industrial installations totaling 18,718 tons, and 48,188 window units totaling 45,279 tons.

Increases have been noted in all types of installations since 1946, the company reported, except that capacity of new commercial and industrial air conditioning installations went from 12,668 tons in 1949 to 9,430 in 1950. The number of such installations went from 334 to 421 in two two years.

New Orleans Public Service, Inc., through General Sales Manager E. N. Avegno, reported that commercial and industrial air conditioning installations made in 1955 totaled 4,200 tons of capacity, as compared with 3,370 tons for 1954 and 1,545 tons for 1953.

Frigidaire San Diego, Cooling School Mar. 20

SAN DIEGO, Calif.—Frigidaire has announced that a residential air conditioning and heating installation and service school will be held here March 20-21. Two evening sessions are at 5801 Fairmount Extension.

Jarvis Engineering Formed From Two Boston Companies

BOSTON—Merger of the air conditioning and refrigeration firm of Jarvis Engineering Co. and the heating and piping firm of Walworth, English, Flett Co. has been announced.

To be conducted under the name Jarvis Engineering Co., the joint business will be quartered at 51 Ellery St., South Boston. Kenneth P. Abbott, formerly treasurer of Walworth, English, Flett is now vice president of Jarvis.

Tight Money 'Not Likely' To Deter Store Expansion

CHICAGO — The "tight money" situation is not regarded as likely to deter supermarket expansion plans this year, according to reports from the Super Market Institute's recent general management meeting.

Tight money and other factors have created a tendency to study things a little closer than during the "easy business days" just after World War II, it was noted, but the firms represented plan to proceed.

How To Use 'Climatic Odds' In Projecting Probable Air Conditioner Demand

Meteorologist Says Weather Is of 'Unique' Importance In Marketing Units

The accompanying article is not a long-range weather forecast. But it is an expert's opinion on how long-time weather records can be used to offer some idea of the "probabilities" of weather for a specific time in a particular locality.

The author is an authority in this field, for as a consulting meteorologist he has specialized in analyses and advisories for marketing weather-sensitive products and services.

Near the conclusion of his article he has some particularly relevant thoughts with regard to those merchandisers of air conditioners who reduce prices before the real "selling season" actually starts.

By Loren W. Crow, Consulting Meteorologist, Denver

What are the "climatic odds" that your supply of room air conditioners will meet the demand next summer? What are the "climatic odds" that the demand, due to weather, will be greater or smaller in your immediate marketing area than it was last season?

The answer to these questions can be determined by a careful examination of past weather data for each particular area of concern.

The "climatic odds" are approximately 6 to 1 that the *July* average temperature in New York City during 1957 will be higher than it was in 1956. However, the odds are very high that July temperatures of 1957 will not equal or exceed the all-time record heat experienced in July of 1955.

For Chicago, the "climatic odds" are greater than 4 to 1 that the average monthly temperature for *June, 1957*, will be colder than in 1956. This, of course, is for just *one month*, but it is a very important month in the marketing of room air conditioners. Colder weather would mean a correspondingly lower number of room unit sales to the public.

The above statements are merely statements of fact in terms of probabilities and *not specific weather forecasts*. However, in making planning decisions executives can use any help they can obtain to evaluate the many variables they must consider.

WEATHER FORECAST vs. "CLIMATIC ODDS"

There is, of course, a desire for, a need for, and a very good use for highly accurate long-range weather forecasts, which will give manufacturers, distributors, and dealers the weather picture several months in advance.

Such forecasts are *not* currently available. Research and progress in this field are very slow. The time required to test properly any newly-developed technique is such that improved differences can only be proved in intervals of 10 or more years. Fifty to 100 years hence, there will still be a need for more accurate long-range temperature forecasts.

Having accepted the above facts, we must then use the best information that is *currently* available. It is the intent here to emphasize the uses which can be made of material obtained from detailed examination of past climatic data.

By using such data, the "climatic odds" can be given for what temperatures to expect for any period in the future. The distinct advantage is using "climatic odds" is that they can be easily expressed in numerical probabilities.

CLIMATIC RANGE REMAINS UNCHANGED

It is important to understand that *climatic range* continues to be satisfied at any one location over long periods of time. The variations in hotness in two succeeding seasons may differ considerably, but both of the seasonal values will remain within the climatic range for that location.

When a description is given of the summertime climate at a specific location, the most complete picture of the climatic range is shown by presenting the entire array of past data, both on a time scale and a frequency scale. If the period covered extends over 40 or 50 years, this gives a very good definition of the climatic range for that particular station.

Most of the values will fall somewhere near the median value, and there will be infrequent occurrences of values near the extremes. The longer the period covered, the less chance there is that any future value will be an extreme which is either colder or warmer than the extremes already established.

CLIMATIC CHANGE EXTREMELY SMALL

Although we have overwhelming evidence that there is a constant gradual change of the climate in every area of the globe, we can also be sure that these changes are very, very slow in their occurrence. A recent research report dealing with temperature at St. Louis showed that climatic change can and does take place at a rate of approximately 1 degree in 50 years. This would mean a change of only 1/50th of 1 degree each year.

DEVELOPMENT OF "CLIMATIC ODDS" VALUES

An examination of Fig. 1 will show the background for development of the statement that the odds are greater than 4 to 1 for a colder June, 1957, than the temperatures recorded in Chicago in June, 1956. This does not rule out the chance of a hotter June in 1957. There is about a 20% chance that it will be hotter.

After careful adjustment was made for all the temperature observations made at other earlier thermometer locations (temperatures are now recorded at the Midway Airport Station) comparable values are presented for

(Continued on next page)

For more information about products advertised on this page use Information Center, page 66.

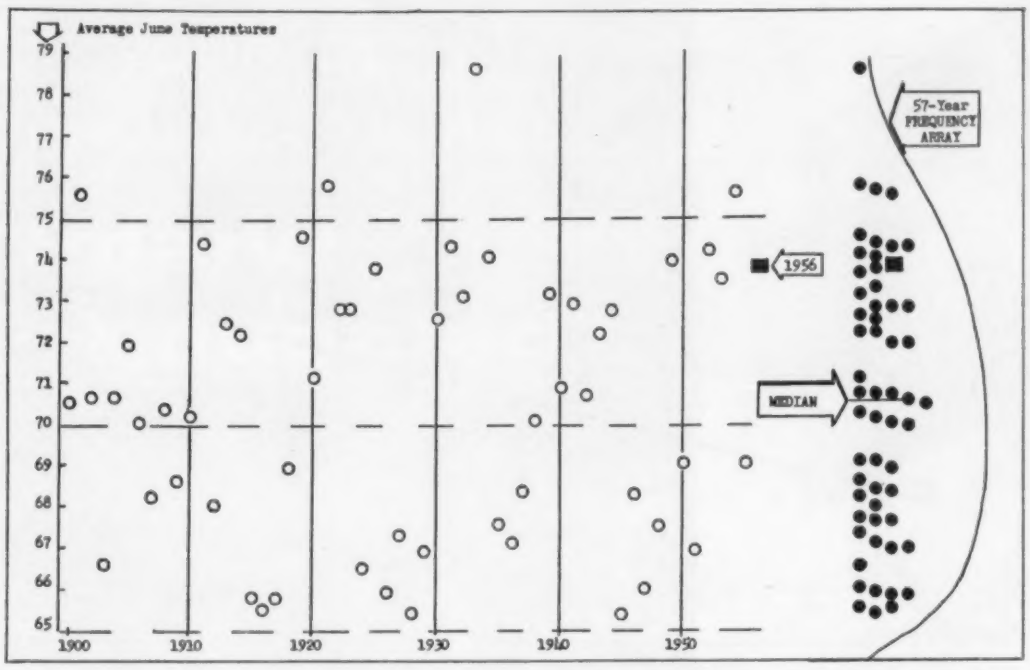


FIG. 1—Historical record of June temperatures (adjusted to compare directly with current thermometer locations) at Chicago from 1900 through 1956. Also shown is 57-year frequency array.

'Climatic Odds' On Cooling Demand--

(Continued from preceding page)

57 Junes (since 1900) at Chicago. All of the values shown are directly comparable to the present location of thermometers at the airport. At the right hand side of Fig. 1 is shown the frequency array of the various values which were recorded during the 57 Junes.

June, 1956, is shown by a small square in both the time series and the frequency array. It will be noted that this was among the warmest which have been recorded in Chicago. In fact, there have been only 10 Junes that were warmer, and 46 that have been colder. There has been only one instance in the 57-year period when an average June temperature as hot or hotter than June, 1956, was followed by a succeeding June which was also hotter than June, 1956.

The next question to be asked would be "How much colder?" is it likely to be in June, 1957, in Chicago. While a single specific forecast is not possible by the use of a "climatic odds," the frequency array shows that the highest probability would be for some value between 1 and 6 degrees below what it was last June.

It should be emphasized here that the greatest use of "climatic odds" is for giving an indication of the *direction of change* to be expected.

The "climatic odds" for June, 1957, are different at each location. Although they show a somewhat pessimistic outlook for June at Chicago, each marketing area needs to be treated separately. In Atlanta and Memphis the "climatic odds" favor a warmer June in 1957 than they had in 1956.

The "climatic odds" can be determined on a monthly or seasonal basis for any given marketing area. In their use on a seasonal basis some arbitrary weightings are needed to assign each monthly value its proper share of influence. Every season contains both abnormally hot and abnormally cool periods. The most units will be sold by those organizations who are prepared to exploit the added opportunities afforded them in the hotter periods.

MEASUREMENT OF ABNORMALTIES IN NUMBERS OF UNITS REQUIRED

Even if a detailed accurate forecast were available for future temperatures, it is extremely doubtful that very many distributors or dealers would be able to interpret this forecast in terms of the number of units that might be required in a particular marketing area.

Neither is it to be expected that there can be a fine detailed figure determined even with the greatest amount of scientific endeavor. The best that can be hoped for are some approximations.

Based on some analysis work done for the Central Management of Carrier Corp. during this past year, comparisons were made in the percentages of annual numbers of units which were delivered from distributor to dealers with various temperature anomolies at 22 cities throughout the United States.

Along the bottom scale of Fig. 2 is shown the plus and minus June temperatures which occurred at the various cities. The vertical scale gives the per cent of the annual total number of room units which were moved to the dealers in June.

It is quite obvious that there is a direct response to warm June temperatures as compared with old temperatures. If the temperatures are minus 3 or colder, it appears that only about 10% of the annual total will be moved from distributor to dealer during the month of June. This can be contrasted with values from 20 to over 40% that are moved from distributor to dealer with months that are plus 3 or more above the normal temperature.

(Continued on next page)

'Climatic Odds' on Demand--

(Continued from preceding page)

It is unfortunate that industry-wide detailed records of daily and monthly *sales at the dealer level* are not available anywhere. However, it can generally be assumed that the high shipments from distributors to dealers in June were in response to high sales at the dealer level.

In translating the findings of Fig. 2 in terms of numbers of units we can use an example of a marketing area which might be expected to absorb 50,000 units for the entire season with normal weather conditions. If a cold June (minus 4° anomoly) occurred in this marketing area, only 5,000 units would be moved in June (10% of 50,000).

If, on the other hand, temperatures were extremely warm, as many as 20,000 units might be moved in June.

To obtain the specific values for a particular marketing area careful analysis should be made of several years of past data to determine the growth pattern. This can best be done by normalizing the data for each season. This, in effect, is an attempt to estimate the numbers of units that would have been sold with *normal weather*, rather than the actual values which were sold.

GROWTH IN ACCEPTANCE IS GOOD

In making a careful analysis of several marketing areas, it is noted that the growth in acceptance of room air conditioners has been very good by the public in the past five or six years.

While it is true that the greatest single variable continues to be the fluctuations in the weather, it is also true that even with a month or season of abnormally cold temperatures, there is a sizable market for room air conditioners.

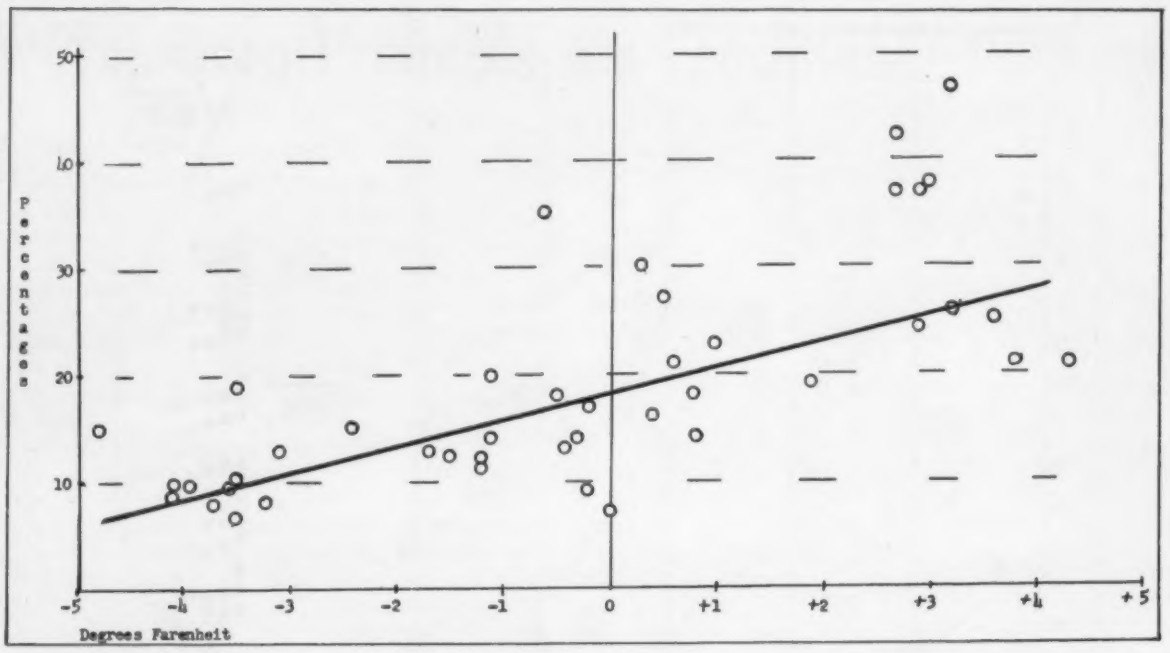


FIG. 2—Relationship between temperature abnormalties and the per cent of the annual total shipments from distributor to dealer during the month of June—based on 1954-55 data.

The projection of the normalized growth pattern gives a middle value for the subsequent season that can be expected as the numbers of units to be marketed in that particular area.

In addition to the middle value, it is possible to plan for the possible ranges of influence of either hot or cold temperatures which may develop and thus directly effect the future marketing of room units. The value of each degree of temperature is not the same in terms of units. If the temperatures are plus 6, the sales can be expected to increase by a larger amount than twice the increase they would have with a plus 3.

Conversely, even though the temperatures are cold, there is probably not a corresponding decrease in number of units sold from the numbers that would be sold with normal weather. Thus, the effect of temperatures is not uniformly arranged around the middle temperature value.

WHY IS A ROOM AIR CONDITIONER A DIFFERENT TYPE APPLIANCE?

In the past several years it has developed that most room units are handled by stores that also handle other types of electrical appliances. It would appear that very little effort has been expended to impress the appliance dealers with the unique importance of weather in the marketing of room air conditioners.

In spite of the honest desire to spread the sale of room air conditioners throughout the entire year, there will continue to be a summertime peak in their sales since the *use season* is a limited one, and will remain so. Room air conditioners will be sold by good salesmen at any time throughout the year, but the bulk of sales will continue to remain in the period between April and August.

No other major appliance has such a limited use period, and thus a corresponding peak period for its sales. It would appear that the dealers should become completely familiar with this season, and gear their pro-

(Concluded on Page 47, Col. 1)

For more information about products advertised on this page use Information Center, page 66.

YOUR BEST
PROSPECTS ARE

"Inland Educated"

Look, Mr. Dealer! Here's an idea that's as fresh and welcome as a crisp, cool breeze on a hot summer's day.

Saturday Evening Post and Better Homes and Gardens' readers will think so, too, as they learn, through Inland's beautiful eye-catching, full-color advertising, about the season's most glamorous new refrigerator accessory—at their dealers.

So be ready. Be sure your refrigerators come through equipped with the new "Magic Touch" Handi-Stor Trays and Ice Chest. Demonstrate these colorful, bright, new Inland Trays in a brand new refrigerator . . . and sell 'em both.

NOW!

Just touch the lever ...ice cubes pour down!

"Magic Touch" lever releases trayful of cubes into Ice Chest!

Ice Chest stores loads of cubes and is handy server at table or counter!

INLAND "Magic Touch"
HANDI-STOR ICE CUBE TRAY

Imagine the convenience! Just pull down on the "Magic Touch" lever and presto! A trayful of hard, dry ice cubes falls into the Handi-Stor Ice Chest. And it's all done right in the refrigerator! No muss. No fuss. And your hands stay dry! Trayfuls of ice cubes are stored—always ready to use. "Magic Touch" trays come in colors of bronze, blue, gold or aluminum with Ice Chest to match. Ask your favorite store for "Magic Touch" Handi-Stor Trays and Ice Chest for the freezing compartment of your present refrigerator or freezer.

Be sure the refrigerator you buy has New "Magic Touch" Handi-Stor Ice Cube Trays. Ask your dealer.

INLAND MANUFACTURING

INLAND MANUFACTURING DIVISION
General Motors Corporation, Dayton, Ohio

word's gettin' 'round

. . . about the wonderful, wanted features of Inland's new "Magic Touch" Handi-Stor-Ice Tray and Ice Chest, and every time you or your salespeople demonstrate and sell one, you can be certain word will get around.

Truly, Inland's new "Magic Touch" Handi-Stor Ice Cube Tray and Ice Chest is a storehouse of exciting features . . . from the lovely bronze, blue, gold, and aluminum colors to the bountiful supply of hard, dry ice cubes it holds . . . a topic of conversation in itself.

So be sure your refrigerators are sales-ready . . . sales primed with beautifully attractive, nationally advertised Inland "Magic Touch" Handi-Stor Ice Cube Trays and Ice Chests . . . today. Demonstrate this new sales appeal. Stock up on them . . . order today.

Ice cubes pour down by the trayful !

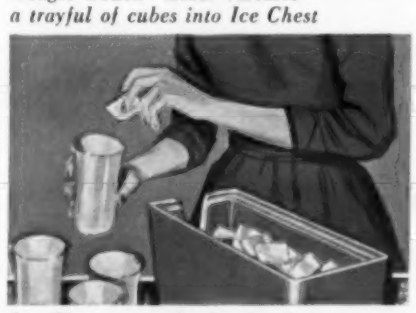
INLAND "Magic Touch"
HANDI-STOR ICE CUBE TRAY

It's new! It's wonderful! It's ice cube magic! All you do is put the new Handi-Stor Tray in place, pull down on the "Magic Touch" lever —and instantly a trayful of hard, dry ice cubes drops into the insulated Ice Chest. Several trayfuls can be stored at the same time ready to use. "Magic Touch" Handi-Stor Trays are available in colors of bronze, blue, gold and aluminum with Ice Chests in matching colors. The colorful Ice Chest is handy in the kitchen, or as a buffet accessory for serving guests.

• • •

Be sure your new refrigerator is equipped with Inland "Magic Touch" Handi-Stor Trays. Ask your dealer for them.

"Magic Touch" Lever releases a trayful of cubes into Ice Chest



Ice Chest stores loads of cubes, and is handy at table or counter

INLAND MANUFACTURING

INLAND MANUFACTURING DIVISION
General Motors Corporation, Dayton, Ohio

'Climatic Odds'--

(Concluded from Page 44, Col. 5)

motion efforts accordingly.

Just why large department stores, as well as certain notable discount houses, should offer large discounts on room units in May and June is a bit of a puzzle to a meteorologist. This occurs at a period in the year when the "anticipated discomfort" of the customer for the season ahead is probably at its peak. The really hot season has not yet started, and he has the advantage of being able to keep himself cool for the entire season if he acts in May and early June.

There is an additional impulse which begins to grow in June and increases until the peak of the summer heat season. This might be titled the "current discomfort" impulse.

A hot day in the middle of June gives the potential customer "current discomfort" and forces him to realize that there are still many hot and hotter days ahead. This should furnish him with a real reason to purchase a room unit.

CARRY-OVER INFLUENCE OF HOT WEATHER

Even though there is a large increase in sales on a current basis within that same season due to abnormally hot weather, there is also a carry-over influence throughout the following winter and spring season. This can account for an additional 10 or 20% in the following season's total sales.

With the fairly rapid growth in acceptance which has been taking place for the past several years, it is somewhat difficult to determine what actual percentage values can be assigned to this carryover affect. However, it is quite evident in the detailed data for several marketing areas.

"Climatic Odds" are primarily for use in long-range planning. Such planning could affect advertising schedules, production schedules, distribution contracts, promotion schedules, shifting of goods, etc. In all cases these are items in which decisions are now being made several months in advance.

Careful analysis of past climatic data is required for each respective area. When several are served by one company an over-all figure of "climatic odds" can be obtained by proper weighting of each area in terms of its relative importance to that particular company. A better understanding of the details relating the weather to room unit marketing, should lead to better planning throughout the industry.

Snipes To Install, Service Refrigeration, Cooling Units

HUNTSVILLE, Ala.—Thomas (Mack) Snipes recently opened the Snipes Refrigeration Co. here at 927 Franklin St.

He will service and install both domestic and commercial refrigeration and air conditioning equipment, it was reported. Snipes was formerly associated with H. Ryan Co. and completed a two-year course in refrigeration at Alabama Trade School in Decatur.

Packaged Units Offered In 7½ Through 60 Hp.

JOHNSTOWN, Pa.—Flexibility and ease of installation in the field are prime advantages claimed by National-U. S. Radiator Corp. for its new line of packaged air conditioners designed for commercial and industrial use where water supply is limited.

Completely self-contained, both units are available in sizes of 7½, 10, 15, 25, 30, 40, 50, and 60 hp. with accessory parts which include heating coils, flat or V type filter sections, and capacity controls, the company explained.

Model AECR, available in 12 arrangements, has unloaded starting devices. Model SCR with water-cooled condenser has five vibration rails, needs only be connected with power, ductwork, and water, the firm said.

UCLA-Heating, Cooling Group

Propose Joint Environmental Control Institute for Sept.

LOS ANGELES—Joint meetings were launched recently on the UCLA campus between committees from the School of Engineering and the Institute of Heating & Air Conditioning Industries for a joint institute next fall on environmental control as it affects human health and comfort.

A tentative date was set for the institute for next September, a working subtitle was adopted of "Designing The Artificial Climates For Southern California," and an agreement reached for subcommittees to begin work on an agenda March 19.

The institute, part of the heating and air conditioning industry's upgrading program of public education under a so-called Stamp Plan promotion, will cover year-round air conditioning and smog, air conditioning as a factor in reclamation of the California desert, and the sun and other energy sources.

Architects, builders, and engineers will be invited to participate with industry members.

The university was represented by Jack Dillon and Sam M. Houston, assistants to Dean L. M. K. Boelter of the School of Engineering; Dr. Craig Taylor, biophysicist; and Associate Professors Albert F. Bush and Harry Buchberg, all of the School of Engineering.

Spokesmen for the industry were Robert M. Johnson, past president of the institute; Ed O'Callahan, chairman of the education committee; William L. Hoyt, Jr., chairman of the standards committee; Sam Jaffe, publisher of *Building News;* William Oldham, assistant chairman of the Advertising and Public Relation Committee; and Joe Alvin, public relations director.

The joint committee will be streamlined to six members to facilitate planning.

Toledo ASHAE Cited for Cooling Research Exhibit

TOLEDO — James F. Guest, president of the Toledo Section of the American Society of Heating & Air-Conditioning Engineers, accepted a citation, in behalf of his group, for an exhibit showing progress in research in air conditioning.

Selling for Profit—*(In Residential Air Conditioning)*

1. Why the 'Health Factor' Is of Such Importance
2. Can't Sell Residential Like You Sell Commercial

By Frank Klein

Frank Klein has been associated with the air conditioning and refrigeration industry for over 20 years. An engineering graduate of the University of Michigan, Klein became familiar through work done for the Armed Services during World War II with the medical aspects of properly controlled environments. Since then he has held executive sales positions with a number of air conditioning manufacturers. At present he is a partner in Heidenreich, Klein & Associates of Dallas, marketing specialists.

This series of articles is for those who seek to know the basic "appeals" and principles in selling residential air conditioning—they bring out fundamentals which veteran salesmen forget to use, and about which newcomers may know practically nothing.

The entire answer to selling for profit in the residential cooling market is tied up with imaginative and intelligent selling and sales promotion.

In much that follows you will find words, yes even cliches that you have heard before. It is my intent to give them a new and greater meaning. In much that follows you will find outlined, fundamentals, that all too unfortunately have become such accepted facts that they are left to assumption. It is my intent to rehash, rephrase, and re-emphasize these regardless of the extent of your technical and sales knowledge.

If these repetitions seem at first glance boring to you, let me remind you that were you aware of them as you lead yourself to believe were you employing the fundamentals which you know so well to the best possible advantage, there would be little need for reading this at all, nor would you be seeking so earnestly and often desperately for the answer to selling profit in the residential cooling market.

Thus let us start with a basic fundamental question that you think you know the answer to:

WHAT HOT WEATHER DOES TO US

Some who read this may know some of the technical facts involved—most of course, will know the mechanics involved; some may even know both. Yet how many of your prospects, in the length of time you have sold air conditioning products, have been interested in the technical facts or the mechanics of the refrigeration systems involved? I think you will agree, that few if any evidenced such interest.

On the other hand, the fact—supported physiological results of hot weather ARE of interest to a prospect—if he could find someone to tell him what they are.

Or he would be highly interested, if he understood that excessive heat and humidity, in excess to his body temperature, under normal not withstanding excessive and startling strain, are one of the killers of all time. If you stop to think, being comfortable via cooled, conditioned air is a state of being, in this marvelous age of mechanical and technical progress, that people are learning to accept like ham and eggs for breakfast.

What benefits they gain under such conditions, are today ignored as a sales tool for intelligent sales promotion by you men who seek "The Answer."

We go on in our daily routine of letting the assumed facts stand that, (1) one is either *cool* in hot and humid weather in air conditioned atmospheres or (2) *hot* and uncomfortable when not in air conditioned atmospheres.

The physiological effects of air conditioning is the GREATEST SELLING TOOL you have, if you want to enter the, and be a success in the, residential cooling field. Up to the present, many of you who read this have entered and still derive the majority of your income from "commercial" selling of air conditioning products.

DIFFERENT COMMERCIAL MOTIVATING FACTORS

However, the fact must be established at once that in the commercial field there was a far different motivating factor or factors aiding you in the sales of your product, the most important of which stemmed fro competitive enterprise.

In the residential field, there is little competitive spirit other than pride of ownership that augurs for the sale of an air conditioning system to a homeowner. The motivating factor is health and comfort as a combination. While it is, of course, admitted, that health and comfort are also factors in the sale of commercial air conditioning, it remains that they are not the major factor.

The point to be made here is that we must recognize both competitive enterprise and health and comfort as need factors. You must, in order to find that elusive answer to, "Selling for Profit in the Residential Cooling Market" accept the pattern from experience and sell the need for your product and why your product will answer that need better than any competitive product, before you will ever convince a stubborn prospect whom you cannot get to say, "I'll but it."

HUMAN HEALTH 'GREATEST COMMODITY'

Human health is the greatest commodity on the market today. If you do not believe this take a look at the soaring incomes of the medical profession; the pyramiding sales of patent medicines, vitamins, etc.

Are we a less healthy nation of people than in grandmother's and grandfather's time? Certainly not. We are far healthier as a matter of fact, which is shown by the rising index used by insurance actuaries estimating the span of life for insurance policies.

What then has brought

(Concluded on next page)

For more information about products advertised on this page use Information Center, page 66.

Selling for Profit--

(Concluded from preceding page)

about this great concern for HEALTH? Nothing more than imaginative selling through a "fear complex" and the intelligent sales promotion of preventive body maintenance.

In other words, our bodies are surrounded with sales promotion for preventive remedies to protect our health—against what might happen. Furthermore, we take out insurance policies on our lives and health against what might happen.

What then is so different about the maintenance of HEALTH through air conditioning, and preventing breakdown of that health by maintaining the body in healthful, normal air conditioned atmospheres? Health is one of the, if not the greatest need factors that the air conditioning industry has to use as a sales tool. There are others of course.

Those reading this who are engaged in the retail selling end of our industry recognize it—now that it has been re-emphasized, but have you ever honestly considered the value of it before, or used it for what it is worth to convince a stubborn, resistant customer who said, "I cannot afford air conditioning"?

Aren't the people who put off air conditioning, the same ones who carry blue shield and blue cross insurance; fire insurance, theft insurance, accident deductible, and go to the dentist twice a year, and see their doctor for a check-up once a year?

Aren't these people "preventive conscious"? Then why aren't they just as conscious of the "preventive need" for air conditioning with which to guard their health? The answer is, of course, simple and abvious.

Health and preventive need have been sold to the public on a grand scale, on what is known in selling and advertising as "the fear approach," by manufacturers, salesmen and the advertising fraternity in other lines while we have "whittled and complained or played the part of Silent George."

DRAMATIC SALES PRESENTATIONS

Many startling, yet simple facts and dramatic demonstrations are available as sales tools with imaginative selling and intelligent sales promotion.

In selling the residential market you will find that you are doing business on a person-to-person basis with the man and the wife of the house—who are conscious only of health, comfort, owning and operating costs, and increased property values. Most of the sales tools available to you in selling the commercial market will have no application in residential sales approaches.

(The next instalment will tell how air conditioning functions as "preventive medicine" in maintaining good health, and how this is properly used in selling residential air conditioning.)

Firm Chartered

WILMINGTON, N. C.—Newbers' Refrigeration, Inc. here has obtained a charter from Secretary of State Thad Eure to deal in refrigeration equipment.

WHAT . . WHEN . . WHERE — *A Guide to Coming Events of Interest*

Refrigeration Service Engineers Society (RSES) Educational Forum
April 5-7, Sheraton-Palace hotel, San Francisco.

Gas Appliance Mfrs. Association (GAMA) Annual Meeting
April 8-10, The Greenbrier, White Sulphur Springs, W. Va.

National Warm Air Heating & Air Conditioning Association (NWAHACA) Committee Meetings, Technical Conference
April 29-May 2, Hotel Cleveland, Cleveland.

Western Air Conditioning, Heating, Ventilating, and Refrigeration Exhibit and Conference
May 4-8, Shrine Exposition Hall, Los Angeles

Air-Conditioning & Refrigeration Institute (ARI) Board Meeting and Annual Meeting
May 5-8, The Homestead, Hot Springs, Va.

National Restaurant Association (NRA) Convention and Exposition
May 6-10, Navy Pier, Chicago.

American Society of Heating & Air-Conditioning Engineers (ASH&AE) Regional Meetings:
May 2-4, Region 5, New Orleans
May 6-7, Region 4, Los Angeles
May 10, Region 6, Tulsa
May 13, Region 3, Kansas City

Mechanical Contractors Association of America (MCAA) Annual Meeting
May 7-10, Hotel Fontainebleau, Miami Beach, Fla.

American Society of Refrigerating Engineers (ASRE) Annual Meeting
June 2-5, Hotel Fontainebleau, Miami Beach, Fla.

National Warm Air Heating & Air Conditioning Association (NWAHACA) Summer Convention
June 5-7, Fairmont hotel, San Francisco.

Summer Home Furnishings Market
June 17-28, American Furniture Mart, Merchandise Mart, Chicago

They'll Do It Every Time

by

Jimmy Hatlo

Why Homeowners Should Buy Air Conditioning

(Concluded from Page 1)

PERSONAL air conditioning is not only desirable, but is a good investment. Here are some reasons for this attitude—psychological and practical.

Demologists forecast continued long-term warming-up climates for the heavily inhabited northern areas of our Earth. Whether or not this-or-that weather forecaster is right or wrong about long-term climate trends, it is true that most American citizens believe "it's getting warmer every year."

Air conditioning in their offices, factories, retail stores, and transportation (planes, trains, autos) make them dissatisfied with high-humidity-and-temperature conditions at home. You see:

PEOPLE HAVE BECOME CONDITIONED TO AIR CONDITIONING.

They work, play, and ride from here to there in zones of air conditioned comfort. People want it because they have become accustomed to it. Logical next step is to acquire PERSONAL zones of restful, zestful air conditioning in their homes.

But won't it cost too much? As Al Smith used to say, let's look at the record.

Really, residential air conditioning is relatively inexpensive. Families who don't have it spend good money here and there to escape their hot homes via auto-travel (gasoline, parking) and visits to air conditioned restaurants and theaters. Many of them also splurge on lake cottages during the summertime. All those expenditures (add 'em up) cost a lot more than a home air conditioning unit, and they inconvenience Pa. Besides, Pa would rather stay home. So would Ma and the kids if they were cool.

A complete home air conditioning system is a money-saver for any family for these additional reasons:

(1) Rugs, drapes, wallpaper, carpeting, furniture, and appliances seldom need cleaning or refurbishing in an air conditioned home. Normally you pay through the nose at least twice a year for these wholesale cleaning jobs.

(2) Allergies, hay fever, colds, and other respiratory diseases are thwarted—which saves doctor bills and lost work-time.

(3) Anything a man buys to bolster his self-esteem—a new car, furniture, appliances—usually depreciates overnight. EXCEPTION to this rule-of-thumb: air conditioning. The moment you add air conditioning to your home, and at least for three years thereafter, air conditioning enhances its value. (We've mentioned this earlier but it is so unusual it's worth repeating.)

(4) Air conditioned homes are happier homes. Fewer tensions and perspiring arguments take place when Pa, Ma, and the kids are cooled into being quietly comfortable. There's quite a bit of evidence to prove this point.

(5) Housewives don't fume over petty exasperations — such as hardened salt shaker, stuck drawers, kitchen odors, or soggy breakfast cereals—if their homes are air conditioned.

(6) Father gets a good night's sleep in an air conditioned bedroom; hence is a better breadwinner for the family next day.

(7) Mother's permanent waves don't come unglued so quickly in an air conditioned home. Her facial makeup lasts longer. Furthermore, she needs a smaller specialized summer wardrobe (shorts, etc.).

All these things reduce a family's summer budget appreciably.

As an extra dividend a residential air conditioning system is fully automatic. Unlike almost anything else you buy to improve your home, your comfort, or your standard of living, you don't have to think about it, or spend hours on it, to make it work.

Air conditioning is automation in the home.

Old age, paradoxical as it may seem, has more time. When I was young I was amazed at Plutarch's statement that the elder Cato began at the age of 80 to learn Greek. I am amazed no longer. Old age is ready to undertake tasks that youth shirked because they would take too long.—SOMERSET MAUGHAM.

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F. M. COCKRELL, *Founder*

'The Conscience of the Industry'

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READER LOUDLY SECONDS LETTER FROM BARTON

Bristol, Va.

Editor:

A very LOUD second to the letter by Mr. Larry R. Barton concerning 5-year warranty. Please, for the very life of all dealers, distributors, and many manufacturers: let us cease this foolish offering without enough profit margin to support it. Only Zippo Lighters exceed this offer and it has only two moving parts and no electrical components.

H. A. HUNTER

NO HOLDS BARRED IN FIGHT FOR TOP SPOT

Smallcomb Electric Co.
Los Angeles, Calif.

Editor:

Congratulations to you upon the fine editorial, "Doing Business Like You're Going Out Of Business." There certainly is a fight on for top position in the volume field and no holds barred.

When the room air conditioning first started four or five years ago they first waved a white and pink price sheet at you. The white was for the punks, but the pink was for a few of you, "specially selected boys." Later on, towards the beginning of the season, another color or two showed up with prices that make you a sap for falling for the pink sheet early in the year.

Today there are more different colored price sheets out than, Carters got pills, and you are afraid to buy from the last column of the latest color for fear another and better colored sheet shows up tomorrow.

It does seem to me that more of us should support a manufacturer who is interested in building an honest product to sell at a fair price through wholesale and dealer channels, whose first consideration is the users complete satisfaction.

May I have permission to reproduce one hundred of this editorial?

C. T. SMALLCOMB, President

SEES 90% AGAINST 5-YEAR WARRANTY

Sig Cox Refrigeration & Air Conditioning
Augusta, Ga.

Editor:

I read with interest Mr. Barton's letter in a recent issue of your magazine concerning the five-year warranty.

My hat goes off to a man that has the initiative to start the ball rolling on a much thought of and long past due matter.

I believe if a poll was taken as Mr. Barton suggested, that 90% of the industry would more than welcome a cease of the five-year warranty.

I believe the NEWS could do a top notch job in getting this matter straightened out as it has done for many jobs in the past.

Thanks for a splendid report.

G. W. AMERSON,
Service Manager

SEASONED MECHANIC FINDS GREENER PASTURES

Bayville, N. Y.

Editor:

I went into the refrigeration art 11 years ago. I have had much experience in the repair of refrigeration equipment working with all types of refrigerants, on commercial and domestic machines; also air conditioning up to 7½ tons.

After the performance of at least 25,000 service calls, I think I can truthfully call myself a seasoned mechanic also somewhat of a customer relations expert. I consider the ability to treat a customer properly to be the most important tool in a serviceman's tool kit.

Well, anyhow, at the present time, I am no longer a refrigeration serviceman. I am an appliance serviceman. I fix electric ranges and change parts on balky sealed unit domestic machines. I am in this line now because the monetary reward is greater for a serviceman who is willing to work. I just can't hang around waiting for the proper reward of at least average competancy in the commercial refrigeration and air conditioning field. The supermarket still wants cash for those groceries. Sure I miss the heft of carrying a refrigerant drum, the once bright brass of the old gauge set is now tarnished, the flaring tool is stiff from disuse. But I will have to admit my screwdrivers and nut-drivers get plenty of use.

What's my gripe? Exactly this; To preface it I will say this: In a very interesting article in the NEWS (best "text book" in the business) a college professor wrote that "Perhaps the American public has been over sold on a bachelor's degree." My reaction is "and how!"

In the New York Metropolitan area the average top wage for an experienced refrigeration mechanic is around $2.50 per hour. For this princely sum, he must be an expert on refrigeration machines of various tonnage, motor, wiring, and plumbing, plus plenty of responsibility. Also he must cope with the fact that "if you work for a good boss he will keep you on in the winter time too."

A great future for air conditioning and refrigeration is predicted. I also feel this way. But "who will fix them?" Perhaps when the seasonal aspect of employment is removed and monetary rewards commensurate with intelligence and responsibility is sufficient, many "old timers will return to the fold.

J. A. MCGRATH

FURNACE CYCLE IS FIVE ON, ONE OFF

B. P. Rhinefort
Fort Worth, Texas

Editor:

Just finished reading your article in the Feb. 25 issue dealing with the job that we have been doing here in Fort Worth on conversion.

I want to take my hat off to you for the very interesting article that you wrote. You certainly went overboard, and I feel that we are not deserving of all this good publicity. I do say that I appreciate it very much, and to you, many, many thanks.

There was one little item possibly of misunderstanding, or the printer misunderstood it, and that deals with the gas furnace cycling from a one-to-five ratio. I noticed in the article that it had the furnace on for one minute and off for five. This should be reversed. . . .

I also took time out for reading the other two articles dealing with the seminar that was held here in Fort Worth. . . . The picture that you have painted in this article is so clear that the dumbest of dumb certainly should derive some knowledge.

B. F. RHINEFORT

CONTRACTORS' PROFITS STORY GETS PRAISE

Fahnestock, Inc.
Wichita, Kan.

Editor:

Enjoyed your article on air conditioning contractors' profits in the last issue and just want to thank you for spearheading a move to put sense into our operations.

Edw. G. FAHNESTOCK

ORDERS 10 COPIES BEFORE 'SHOWCASE' IS OFF PRESS

Radio & Appliance Corp.
Nashville, Tenn.

Editor:

Please be kind enough to send us ten extra copies of your March 18 "SHOWCASE" issue as quickly as it is available.

We would like to take a moment to congratulate you on having the most informative publication in the industry.

B. H. MCLAIN

Demand for Graduates Of Idaho College Course Exceeds Supply

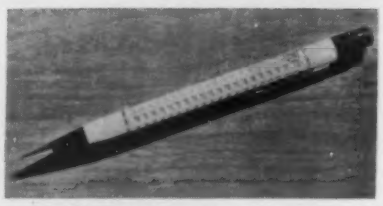
POCATELLO, Idaho—The demand for graduates of Idaho State college's concentrated one-year course in refrigeration and air conditioning always exceeds the supply, according to George Foulk, instructor in the course. He said there is an increasing demand for the school's graduates because of the ever-growing air conditioning and refrigeration market.

Foulk started the refrigeration course 12 years ago. The course lasts a year, includes 1,080 hours of study, including theory and practical shop experience.

One hour each school day is devoted to theory and book work. The remaining five hours is devoted to practical application on actual refrigeration equipment in the school's shops.

Mitchell Mechanical Pencil Calculates Residential Heat Loads 'In 30 Seconds'

CHICAGO — A new patented "Residential Load Calculator" contained in a mechanical pencil has been announced by R. H. Lodge, packaged air conditioning sales manager of Mitchell Mfg. Co.



A COMBINATION pencil and load calculator for determining heat load for residential air conditioners, called "Residential Load Calculator," is available from Mitchell Mfg. Co.

The combination pencil and load calculator is a simple, yet accurate, aid for making a quick estimate of the proper size air conditioning unit required to air condition a home or small office.

He claimed that "in less than 30 seconds" the calculator solves the problem of making "an immediate, accurate, on-the-spot calculation for a telephone inquiry bid on an air conditioning job."

The main body of the calculator pencil is blue and white.

In a stationary column at the left, in blue figures, is a schedule of 19 different sized homes or offices in square footages, ranging from 750 up to 2,500 sq. ft.

At the top is a window where the design conditions for the particular areas are permanently set. There are four area settings from 15° F. to 30° F. design conditions.

The remainder of the pencil is comprised of red figures on an adjustable column indicating the air conditioner tonnage required, ranging from 1.5 tons to 5.4 tons.

The size of the unit needed to air condition a house, it was explained, is found by:

1. Setting the temperature differential in the window on the top for design conditions of the area;

2. Reading down the square footage figure to the size of the job being bid;

3. The proper tonnage needed for that floor area appears in the window of the adjustable column.

"The Mitchell Residential Load Calculator does not begin to solve all the applications of central air conditioning," Lodge said. "It does, however, offer the first step toward overcoming the complicated and highly technical calculation sheets and gives the installer a method for determining the unit needed."

For Distributors, Dealers

Am-Stan Schedules 7 One-Week Heating, Conditioning Courses

NEW YORK CITY—An expanded 1957 first-half schedule for the distributor and dealer heating and air conditioning courses held at its Elyria Training Center has been announced by the Air Conditioning Div. of American-Standard.

Seven one-week courses are presently scheduled. Two classes will be devoted solely to winter air conditioning, three to summer air conditioning, one will be a combination heating and cooling class, and one an advanced course on heating and cooling.

These classes are free to Air Conditioning Div. distributors and their dealers.

Summer air conditioning courses cover heat gain calculations, air distribution for comfort, design of duct systems, unit sizing, and product installation and application.

Heating courses cover factors affecting comfort, heat loss calculation, perimeter, loop and extended plenum systems, service, maintenance, and installation and application of product.

Warren Campbell, training supervisor, stated: "These courses are highly intensive and must, therefore, be held to not more than 18 or 20 students so that a great deal of individual instruction can be given to each man. Limiting classes in this manner is essential so that thorough training can be accomplished in a very minimum of time as every day away from the shop is a business day lost for the dealer.

"It also means," stated Campbell, "that demand for these classes far exceeds our capacity. We will, however, keep repeating these classes in the future for the benefit of those who cannot be accommodated now."

Registration for these classes is handled through American-Standard Air Conditioning Div. distributors who can supply the dealer with all necessary information.

Ammerman, Marlo Join Air Moving Group

DETROIT—C. L. Ammerman Co., Minneapolis, and Marlo Coil Co., St. Louis, have been elected to membership in the Air Moving & Conditioning Association, it was announced by W. H. Rietz, AMCA president.

The Ammerman company manufactures power roof ventilator equipment. Marlo Coil makes central station air conditioning units and other heat transfer equipment.

"Purpose of the 59-member trade association is to serve industry and the public by improving standards and practices within the industry," it was noted.

Clinics, Meetings To Lead N. Y. Motel Show May 13

NEW YORK CITY — The spring meeting of the National Motel Show will be held at the Hotel Statler here, May [illegible]15.

In addition to a diversified showing of motel supplies, equipment, and services, several meetings and clinics will be staged, featuring experts drawn from many fields.

Serving as honorary chairman for the event will be Bud Quadland, president of the Eastern Motel Association. Taking over one full day, the Eastern Motel Association will hold its regular spring meeting.

William Spigler, director of the show, estimates that an attendance of over 3,000 motel operators and other visitors will attend the three-day exhibit and meeting sessions. There is no registration fee, with exhibits and meetings open to all those interested in the motel industry, it was added.

For more information about products advertised on this page use Information Center, page 66.


IF YOU HAVE A PROPOSITION THAT WILL KEEP OUR HOME CLEANER ELECTRONICALLY
...AND ELIMINATE HALF OF MY HOUSECLEANING
...AND NOT COST TOO MUCH
WE'RE INTERESTED!
HERE'S AN
IMPORTANT NEW SOURCE OF PROFIT FOR YOU
an Electronic
HOME AIR FILTER
that you can sell for as little as
$189.00
PLUS INSTALLATION
See back of this folder for special introductory 90-day $90 offer

Sell automatic housecleaning...

Electro-Klean

ELECTRONIC HOME AIR FILTER

- NO SPECIAL WIRING
- NO WATER OR SEWER CONNECTIONS
- NO MOVING PARTS TO WEAR OUT
- NO TUBES TO REPLACE
- NO MAINTENANCE PROBLEMS
- NO PLATES TO WASH

traps 20 times more air-borne dirt than throw-away filters!

Now you can sell what every woman wants . . . super-cleaned air all over the house . . . for healthier living, for greater freedom from housecleaning drudgery. Through advanced design and volume production, the miracle of electronic air filtering is brought well within the reach of any family's budget!

Electro-Klean opens up a new field of profit for you—new opportunities for sales to old customers, a new way to lift a sale out of competition, a positive method of assuring greater customer satisfaction.

Be sure to get your share of this profitable new business by displaying *Electro-Klean*, by demonstrating to your customers.

Electro-Klean COMPLETE RANGE OF SIZES

MODEL	C.F.M. RATING	FURNACE B.T.U. OUTPUT RATING	AIR CONDITIONER RATING	UNIT WT. IN LBS.
ZL-3H	1000	100,000	2-Ton	67
ZL-4H*	1330	133,000	3-Ton	82
ZL-5H	1660	166,000	— —	93
ZL-6H	2000	200,000	5-Ton	111
ZL-7H	2330	233,000	— —	121
ZL-8H	2660	266,000	— —	124

*ILLUSTRATED ABOVE LEFT.

See back page for special 90-day—90-dollar offer on Model ZL-3H *Electro-Klean*.

Another product of the world's largest and oldest manufacturer of electronic air filters

.....all through the house!

See back of this folder for special introductory 90-day $90 offer

SPECIAL

90-day 90-dollar offer you get

OFFER WITHDRAWN MAY 30, 1957
Only one (1) to a customer

WHY THIS SPECIAL OFFER—Electro-Klean sell faster when shown and demonstrated. Use this actual *Electro-Klean* for store display, or in your own home where it can be demonstrated easily.

ACTUAL
Electro-Klean
MODEL ZL-3H
(See specifications, page 2)

Electro-Klean
DISPLAY

BIG
Opportunity
FOR
NEW PROFITS

FIRST CLASS
PERMIT No. 10
LOUISVILLE, KY.

BUSINESS REPLY ENVELOPE
NO POSTAGE STAMP NECESSARY IF MAILED IN THE UNITED STATES

4¢ POSTAGE WILL BE PAID BY—

AMERICAN AIR FILTER COMPANY, INC.
215 CENTRAL AVENUE
LOUISVILLE 8, KENTUCKY

ATTN. *Electro-Klean* Dept.

This is an order

Cut out this page on dotted line. Fold twice with blue mailing side showing. Fold so that spot gumming at top of reverse side of page will hold mailer closed. Moisten gum and seal. No postage is necessary.

American Air Filter COMPANY, INC.
215 CENTRAL AVENUE, LOUISVILLE 8, KENTUCKY

PLEASE SHIP US one (1) *Electro-Klean,* Model ZL-3H, at the special introductory price of $90.00, F.O.B. Morrison, Ill., including the display. Our order number:

NAME_____

ADDRESS_____

CITY_____ ZONE____ STATE_____

ORDERED BY_____ TITLE_____

PLEASE CHECK: DISTRIBUTOR ☐ DEALER ☐

Form No. 256-P5

NOTE: Terms are net 30 days. Unit weight 67 lbs.
Printed in U.S.A.

IN TWO PARTS — PART TWO

AIR CONDITIONING & REFRIGERATION NEWS

The Newspaper of the Industry

"Specifications Section"

March 18, 1957

Issued every Monday at 450 West Fort St., Detroit 26, Michigan

Established 1926

Member, Associated Business Publications — Member, Audit Bureau of Circulations

Index to Specifications In This B Section

All specifications data published by the NEWS this year will be found in this Part Two of the March 18 Showcase issue. No specifications appear in Part One. News, field reports, and market data plus a history making concentration of air conditioning advertising appear in Part One.

Swing to Residential Cooling Field Visible In Specifications Submitted by 106 Firms

DETROIT — Specifications on the 1957 lines of air conditioning equipment marketed by 106 firms are presented in this special section of AIR CONDITIONING & REFRIGERATION NEWS.

The data published here covers 39 lines of self-contained room air conditioners, 51 lines of self-contained commercial packaged equipment, and 78 brands of residential air conditioning systems, including heat pumps.

On these pages are found the equipment of almost every major producer in the country and most of the smaller firms operating on a regional basis.

Each type of equipment is presented separately. Lines are listed by brand name. An index to manufacturers is found in adjoining columns.

78 FIRMS SELL HOME COOLING UNITS

Reflected strongly in this fifth annual compilation of specifications data by the NEWS is the growing interest among air conditioning equipment manufacturers in the residential market.

While the total number of companies represented is two more than last year, the number selling residential equipment has increased from 71 to 78. The 51 commercial lines compares with 57 last year and 58 in 1955. The 39 brands of room air conditioners is one short of last year and 17 fewer than in 1955.

Even these figures do not fully reflect the trend to residential air conditioning, however. There are a number of other firms known to be making residential equipment that are not included here. Even some of those whose commercial or room units only are listed also make residential units.

New this year is a separate listing of residential heat pumps. These eight, of course, are far from a complete list. Some manufacturers who make heat pumps as adaptations of their regular residential units have included them in their residential listings. Other heat pump makers did not submit specifications.

To make these listings more meaningful, the NEWS this year has sought some additional data.

USE OF ARI RATING STANDARD NOTED

Room unit manufacturers were asked if their cooling capacities were computed according to the ARI standard. When so rated, this fact is specified in the listing.

An attempt was made to include "through the wall" room units. Dimensions cover either the cabinet of the window-type unit or the wall sleeve for the built-in models.

On commercial units, the height dimension specifically includes the plenum, unless it has otherwise been noted.

Biggest changes were made in the residential listings. New is a column telling if the system is pre-charged at the factory. The final column gives the water usage rate of water-cooled equipment.

Manufacturers of split systems were asked to list first the condensing unit and then the evaporator units that could be hooked up to that condensing unit. They were also asked to indicate whether the air handling equipment was intended for upflow, downflow, or horizontal flow operation.

Such a flood of information came in that it was physically impossible to print it all. As a result, the specifications were edited to concentrate on the upflow models.

Where other types of models are offered in the same size, this fact is noted below the listing. When no upflow model is offered in a particular size, the specifications for the horizontal flow unit in that size is shown.

Again because of the large number of models involved and the limited space available, water-cooled units only are listed when both air and water-cooled models of almost identical specifications are available. When such air-cooled units are offered, that fact is noted below.

While this specifications report is without doubt the most complete available, there are still a number of companies known to be in the field who are not represented for a number of reasons.

To cite a few, Drayer-Hanson reported that its specifications on a new line of packaged equipment are not ready yet.

Shana Mfg., Inc. advised that it will produce a complete line of residential and commercial equipment, both air and water cooled in 2 to 6-ton sizes, but that precise data is not yet available.

Weatherking of Florida, Columbia Specialty Co., Inc., Tempco, Inc., and Eureka Williams Corp. could not make the deadline.

The Hess Co., Chicago furnace manufacturer, was unable to give detailed specifications on its cooling equipment at this time.

Sub-Zero Freezer Co., Inc., Fogel Refrigerator Co., and Victor Products Corp. reported that they were no longer manufacturing air conditioning equipment.

The information presented in these listings is that supplied by the manufacturers themselves and does not represent any evaluation by NEWS editors. Only editing done was in the interest of space requirements.

Commercial or 'Store' Type Packaged Air Conditioners

Commercial

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Condenser Type	Condenser Cooling Method	Evaporator Face Area (Sq. Ft.)	Evaporator Rows	Compressor Make	Hp.	Cooling Method	Type	Cylinders	Bore & Stroke (In.)	R.p.m.	Compressor Motor Phase	Volts	Refrigerant Type	Charge (Lbs.)	Blowers No.	C.f.m.	R.p.m.	Blower Motor No.	Hp.	Air Filter No.	Type	Dimensions (In.)	Heating Type	Capacities (B.t.u.h.) Cooling	Heating	List Price
ACI—American Coils Co., Farmingdale, N. J.																														
ACI-30	78⅛	35⅛	25½	Shell & Coil	Water	2.7	4	Copeland	3	Gas	Semi-Hermetic	2	2¼x1 7/16	1750	1—3	230/208/220	F-12	11	1	1200	680	1	⅓	1	Permanent	14¾x25¾x1	Steam	36,000	130,000	....
ACI-50	83⅛	44⅞	26¾	Shell & Coil	Water	4.4	4	Copeland	5	Gas	Semi-Hermetic	2	2½x1 13/16	1750	1-2-3	230/208/220	F-12	13	1	2000	680	1	½	1	Permanent	18½x34¾x1	Steam	61,000	220,000	....
ACI-75	83⅛	51	30¼	Shell & Coil	Water	6.7	4	Copeland	7½	Gas	Semi-Hermetic	3	2⅝x2	1750	2—3	208/220	F-12	16	2	3000	720	2	⅓	1	Permanent	25½x38⅞x1	Steam	93,000	353,000	....
ACI-100	89⅝	57	30¼	Shell & Coil	Water	9.0	4	Copeland	(2) 5	Gas	Semi-Hermetic	(2) 2	2½x1 13/16	1750	1-2-3	230/208/220	F-12	26	2	4000	680	2	½	1	Permanent	29¼x45 x1	Steam	121,000	401,000	....
ACI-150	94½	70	31	Shell & Coil	Water	13.5	5	Copeland	(2) 7½	Gas	Semi-Hermetic	(2) 3	2⅝x2	1750	2—3	208/220	F-12	33	2	6000	780	2	¾	1	Permanent	29¼x59⅝x1	Steam	182,000	558,900	....
Also available in air-cooled models.																														
Airmaster—Alco Refrigeration Sales & Service, Inc., Cleveland																														
CH 750	46	42	110	---	Air	6.25	4	Servel	7½	Gas	Hermetic	4	2⅛x1½	1750	3	208/220	F-22	30	2	2750	720	1	¾	2	Disposable	20x25	Gas	94,000	180,000	$5,900.00
C 750	46	42	84	---	Air	6.25	4	Servel	7½	Gas	Hermetic	4	2⅛x1½	1750	3	208/220	F-22	30	2	2750	720	1	¾	2	Disposable	20x25	....	94,000	....	4,920.00
Special Features: Horizontal roof mounted—for use with combination supply and return, ceiling type diffuser.																														
Airtemp—Airtemp Div., Chrysler Corp., Dayton																														
1002-2	83⅝	35	19⅝	Shell & Tube	Water	3.21	3	Airtemp	2	Refrig.	Serv. Hermetic	4	1x1 5/16	3500	3	208/220	F-12	9	1	800	620	1	¼	1	Disposable	15x30⅝x1	Steam/Water	25,200	65,700	....
1003-3	83⅝	35	19⅝	Shell & Tube	Water	3.31	3	Airtemp	3	Refrig.	Serv. Hermetic	4	1x1 5/16	3500	3	208/220	F-22	9	1	1200	890	1	⅓	1	Disposable	15x30⅝x1	Steam/Water	38,520	66,750	....
1005-2	90⅝	48⅞	19⅝	Shell & Tube	Water	5.30	3	Airtemp	5	Refrig.	Serv. Hermetic	5	1⅞x1½	1750	3	220	F-12	12	2	2000	696	1	½	2	Disposable	22x22x1	Steam/Water	62,400	152,000	....
1008-2	98⅛	48⅞	19⅝	Shell & Tube	Water	5.30	3	Airtemp	7½	Refrig.	Serv. Hermetic	5	1⅞x1½	1750	3	220	F-22	12	2	3000	1030	1	1	2	Disposable	22x22x1	Steam/Water	90,000	196,500	....
1011	97	58	28	Shell & Tube	Water	7.46	3	Airtemp	10	Refrig.	Serv. Hermetic	5	1⅞x1⅛	3500	3	208/220	F-22	19½	2	4000	735	1	1½	6	Permanent	16⅝x18x1	Steam/Water	132,000	318,000	....
1015	105	58	32	Shell & Tube	Water	12.08	3	Airtemp	15	Refrig.	Serv. Hermetic	5	1⅞x1½	3500	3	208/220	F-22	30	2	6000	610	1	2	8	Permanent	2—16x24x1 16⅝x18x1	Steam/Water	180,000	318,000	....
*AC2520-1	104	96	34	Shell & Coil	Water	17.5	4	Airtemp	(2) 20	Refrig.	Hermetic	5	1⅞x1⅛	3500	3	208/220	F-22	40	2	7000	595	1	2	8	Permanent	6—16x20x2 16x25x2	Steam/Water	240,000	480,000	....
*AC2525-1	104	96	34	Shell & Coil	Water	17.5	4	Airtemp	(2) 25	Refrig.	Hermetic	5	1⅞x1⅛	3500	3	208/220	F-22	50	2	8750	586	1	3	8	Permanent	6—16x20x2 16x25x2	Steam/Water	300,000	600,000	....
*AC2530-1	104	96	34	Shell & Coil	Water	17.5	4	Airtemp	(2) 30	Refrig.	Hermetic	5	1⅞x1½	3300	3	208/220	F-22	60	2	12000	625	1	5	8	Permanent	6—16x20x2 16x25x2	Steam/Water	360,000	720,000	....
*AC2540	100	126	54	Shell & Tube	Water	28.0	4	Airtemp	40	Air	Open	5	3x2⅜	1750	3	208/220	F-22	125	3	16000	620	1	5	12	Permanent	16x25x2	Steam/Water	480,000	1,022,000	....
*AC2545	100	126	54	Shell & Coil	Water	28.0	4	Airtemp	(3) 45	Refrig.	Hermetic	5	1⅞x1½	3500	3	208/220	F-22	100	3	18000	630	1	5	12	Permanent	16x25x2	Steam/Water	540,000	1,140,000	....
*AC2560	114	150	58	Shell & Tube	Water	42.0	4	Airtemp	60	Air	Open	7	3x2⅜	1750	3	208/220	F-22	180	3	24000	465	1	7½	24	Permanent	16x20x2	Steam/Water	750,000	1,558,000	....
*AC2575	115	180	70	Shell & Tube	Water	52.4	4	Airtemp	75	Air	Open	8	3x2⅜	1750	3	208/220	F-22	225	4	30000	428	1	10	24	Permanent	16x20x2	Steam/Water	870,000	1,970,000	....
AC2500	115	180	70	Shell & Tube	Water	52.4	4	Airtemp	100	Air	Open	12	3x2⅜	1750	3	208/220	F-22	300	4	35000	513	1	15	24	Permanent	16x20x2	Steam/Water	1,200,000	2,400,000	....
*Also available in 2600 series with evaporative condenser. Heating capacities are for 2-row steam coils, 5 p.s.i.g. steam. One-row steam coils and 1 and 2-row hot water coils also available.																														
Alton—Alton Mfg. Co., Dallas																														
RE-10	66	96	36	Evaporative	Water	6.0	6	Brunner	10	Air	Open	4	3¼x2¼	520	3	220/440	F-12	40	2	3600	860	1	1½	....	....	....	....	125,100	*	$6,540.00
RE-15	74½	120¾	48¾	Evaporative	Water	10.0	6	Brunner	15	Air	Open	4	4¼x3	525	3	220/440	F-12	80	2	5400	670	1	2	....	....	....	....	184,810	*	8,430.00
RE-20	80½	128¾	48¾	Evaporative	Water	12.5	6	Brunner	20	Air	Open	4	4¼x5	435	3	220/440	F-12	100	2	7200	586	1	3	....	....	....	....	255,000	*	9,670.00
RE-25	80½	128¾	48¾	Evaporative	Water	15.0	6	Brunner	25	Air	Open	4	4¼x5	555	3	220/440	F-12	120	2	9000	640	1	3	....	....	....	....	316,600	*	10,480.00
RE-30	80½	149½	48¾	Evaporative	Water	18.0	6	Brunner	30	Air	Open	4	4¼x5	600	3	220/440	F-12	140	2	10800	710	1	5	....	....	....	....	360,000	*	12,780.00
*Note: Unit adaptable for use with external filter plenum and external heating coil at intake to D-X coil, or duct-type heaters. Special Features: Built-in control panel with all wiring complete; evap. cond. complete with 100% prime surface all copper coil and copper jacket; modification available for outdoor installation.																														
American Blower—American Blower Div. of American-Standard, Detroit																														
3C7	85⅝	42	24	Shell and Coil	Water	3.62	3	Carrier	3	Air	Access. Hermetic	2	2x1¼	1750	1—3	208/220/230/440	F-22	9	1	1200	677	1	⅓	2	Permanent	17½x17½x1	Steam/Water	36,000	80,500*	....
5C7	85⅝	42	24	Shell and Coil	Water	4.93	3	Carrier	5	Air	Access. Hermetic	4	1 13/16x1¼	1750	1—3	208/220/230/440	F-22	11	1	2000	787	1	¾	2	Permanent	22x17½x1	Steam/Water	60,000	126,000*	....
8C7	87¾	50	30	Shell and Coil	Water	7.30	3	Carrier	7½	Air	Access. Hermetic	4	2x1 7/16	1750	3	208/220/440	F-22	15	1	3000	623	1	1	2	Permanent	21½x27½x1	Steam/Water	90,000	192,000*	....
10C7	87¾	66	30	Shell and Coil	Water	10.08	3	Carrier	10	Air	Access. Hermetic	6	2x1¼	1750	3	208/220/440	F-22	24	2	4000	662	1	2	2	Permanent	27½x29½x1	Steam/Water	120,000	258,500*	....
10D7	87¾	66	30	Shell and Coil	Water	10.08	3	Carrier	(2) 5	Air	Access. Hermetic	4	1 13/16x1¼	1750	3	208/220/440	F-22	22	2	4000	662	1	2	2	Permanent	27½x29½x1	Steam/Water	120,000	258,500*	....
15D7	96	84	31¼	Shell and Coil	Water	14.68	3	Carrier	(2) 7½	Air	Access. Hermetic	4	2x1 7/16	1750	3	208/220/440	F-22	30	2	6000	574	1	3	3	Permanent	30x25¼x1	Steam/Water	180,000	385,500*	....
20D7	96	108	31¼	Shell and Coil	Water	19.32	3	Carrier	(2) 10	Air	Access. Hermetic	6	2x1¼	1750	3	208/220/440	F-22	48	3	8000	594	1	5	4	Permanent	30x25¼x1	Steam/Water	240,000	513,000*	....
208/220 volt units cannot be adapted for 440 volts. *Heating capacities are for 2-row steam coil at 70° F. entering air and 2 p.s.i.g. steam. Also available with single row steam coil, 1 or 2 row water coil at somewhat lower capacities.																														
American-Standard—Air Conditioning Div., American Radiator & Standard Sanitary Corp., New York City																														
CCA-2	82	25	21⅝	Tube In Tube	Water	2.11	3	Tecumseh	2	Water	....	....	....	1750	1—3	208/220/230	F-22	2# 11 oz.	1	800	760	1	⅓	1	Disposable	18x21x1	....	24,180	....	....
CCA-3	82	25	21⅝	Tube In Tube	Water	2.53	4	Tecumseh	3	Water	....	....	....	1750	1—3	208/220/230	F-22	2# 15 oz.	1	1200	850	1	⅓	1	Disposable	18x21x1	....	36,040	....	....
CCA-5	88	43⅝	23⅞	Shell and Coil	Water	5.98	2	Tecumseh	5	Water	....	....	....	1725	1—3	208/220/230	F-22	6# 10 oz.	1	2000	770	1	⅓	1	Disposable	16x37x1	....	62,900	....	....
ACP-20	20¾	29½	39⅝	Coil and Fin	Air	1.9	3	Tecumseh	(2) 1	Air	....	2	....	....	....	....	F-22	3# 13 oz.	1	810	1120	1	⅙	....	....	....	....	22,000	....	$499.50
ACP-35	24½	36¼	47⅞	Coil and Fin	Air	2.7	4	Tecumseh	(2) 1¾	Air	....	2	....	....	....	....	F-22	5# 6 oz.	2	1505	1120	1	⅙	....	....	....	....	36,000	....	776.00
Armstrong—Armstrong Furnace Co., Div. of National Union Electric Corp., Columbus, Ohio																														
CUC	77	38	21½	....	Water	2.8	5	Copeland	2	Refrig.	Semi-Hermetic	2	2¼	1750	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
CUD	85¾	45½	25	....	Water	4.5	5	Copeland	2	Refrig.	Semi-Hermetic	2	2½	1750	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
CUE	87¾	55½	29¼	....	Water	6.4	4	Copeland	3	Refrig.	Semi-Hermetic	3	2⅜	1750	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
CUF	87¾	72	29¼	....	Water	8.5	4	Copeland	(2) 2	Refrig.	Semi-Hermetic	(2) 2	2½	1750	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
CUG	99¾	86	29¼	....	Water	13.5	4	Copeland	(2) 3	Refrig.	Semi-Hermetic	(2) 3	2⅜	1750	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
BAC—Brunner Mfg. Co., Utica, N. Y.																														
BAC-30	78¼	35¾	25½	Shell & Tube	Water	2.7	4	Brunner	3	Water	Semi-Hermetic	2	2 3/16x1½	1750	....	....	F-12	11	1	1200	680	1	⅓	1	Permanent	14¾x25¾x1	Steam	36,000	63,700	$747.60
BAC-50	88¼	44¾	26¾	Shell & Tube	Water	4.4	4	Brunner	5	Water	Open	2	3¼x2¼	825	....	....	F-12	13	1	2000	680	1	½	2	Permanent	18½x34¾x1	Steam	61,000	95,600	994.35
BAC-75	88¼	51	30¼	Shell & Tube	Water	6.7	4	Brunner	7½	Water	Open	4	3¼x2¼	620	....	....	F-12	16	2	3000	720	2	⅓	2	Permanent	25½x38⅞x1	Steam	93,000	145,000	1,420.65
BAC-100	89¾	57	30¼	Shell & Tube	Water	9.0	4	Brunner	10	Water	Open	4	3¼x2¼	825	....	....	F-12	20	2	4000	680	2	½	2	Permanent	29¼x45 x1	Steam	121,000	171,000	1,915.20
Bard—Bard Mfg. Co., Bryan, Ohio																														
B2061	56½	28¼	19¼	Tube In Tube	Water	1.86	3	Tecumseh	2	Gas	Hermetic	2	1⅝x1.2	1725	1	230	F-22	2.7	1	800	....	1	⅓	1	Disposable	16x25x1	....	24,760	....	....
B3061	56½	28¼	19¼	Tube In Tube	Water	2.69	3	Tecumseh	3	Gas	Hermetic	2	2x1.2	1725	1	230	F-22	3.0	1	1200	....	1	⅓	1	Disposable	16x25x1	....	38,650	....	....
B5061	67	36	25¼	Tube In Tube	Water	4.2	4	Tecumseh	5	Gas	Hermetic	4	1⅝x1 7/16	1725	1—3	230/220	F-22	5.25	1	2000	....	1	½	2	Disposable	16x25x1	....	65,800	....	....
Barkow Weatherwise—Aug. G. Barkow Mfg. Co., Inc., Milwaukee																														
CK2-A	73	31	21	Copper Al.	Air	2.66	4	Tecumseh	2	Refrig.	Hermetic	2	1.75x1.2	1725	1	230	F-22	6	1	800	650	1	¼	1	Permanent	16x25x1	Steam/Water	24,000	....	$1,465.00
CK3-A	73	31	21	Copper Al.	Air	2.66	4	Tecumseh	3	Refrig.	Hermetic	2	2x1.2	1725	1—3	230/220/208	F-22	8	1	1200	650	1	¼	1	Permanent	16x25x1	Steam/Water	36,000	....	1,575.00
CK5-A	75½	38¾	23¼	Copper Al.	Air	4.12	4	Tecumseh	5	Refrig.	Hermetic	4	1.75x1.4	1725	1—3	230/220/208	F-12	12	1	2000	700	1	⅓	2	Permanent	15x20x1	Steam/Water	60,000	....	2,392.00
CK5-A	75½	38¾	23¼	Copper Al.	Air	4.12	4	Copeland	5	Refrig.	Semi-Hermetic	2	2.5x1.8	1750	1—3	230/220/208	F-22	12	1	2000	700	1	⅓	2	Permanent	15x20x1	Steam/Water	60,000	....	2,392.00
CK75-A	79½	52½	28¾	Copper Al.	Air	5.62	4	Copeland	7½	Refrig.	Semi-Hermetic	2	2.3x2	1750	1—3	230/220/208	F-22	18	2	3000	618	1	¾	3	Permanent	15x20x1	Steam/Water	90,000	....	3,532.00
CK2-W	62	31	21	Shell & Tube	Water	2.66	4	Tecumseh	2	Refrig.	Hermetic	2	1.75x1.2	1725	1	230	F-22	4	1	800	650	1	¼	1	Permanent	16x25x1	Steam/Water	24,000	....	1,145.00
CK3-W	62	31	21	Shell & Tube	Water	2.66	4	Tecumseh	3	Refrig.	Hermetic	2	2x1.2	1725	1—3	230/220/208	F-22	6	1	1200	650	1	¼	1	Permanent	16x25x1	Steam/Water	36,000	....	1,260.00
CK5-W	75½	38¾	23¼	Shell & Tube	Water	4.12	4	Tecumseh	5	Refrig.	Hermetic	4	1.75x1.4	1725	1—3	230/220/208	F-22	8	1	2000	700	1	⅓	2	Permanent	15x20x1	Steam/Water	60,000	1 ph.	1,825.00
CK5-W	75½	38¾	23¼	Shell & Tube	Water	4.12	4	Copeland	5	Refrig.	Semi-Hermetic	2	2.5x1.8	1750	1—3	230/220/208	F-22	8	1	2000	700	1	⅓	2	Permanent	15x20x1	Steam/Water	60,000	3 ph.	1,775.00
CK75-W	79½	52½	23¼	Shell & Tube	Water	5.62	4	Copeland	7½	Refrig.	Semi-Hermetic	2	2.3x2	1750	3	220/208	F-22	18	2	3000	618	2	¾	3	Permanent	15x20x1	Steam/Water	90,000	....	2,565.00
Bryant—Bryant Mfg. Co., Indianapolis																														
2-570	74⅞	39	21¾	Shell-Coil	Water	....	....	Tecumseh	2	Gas	Hermetic	....	....	....	1—3	....	F-22	8	1	800	....	1	¼	1	Permanent	....	Steam/Water	24,000	65,500†	....
3-570	74⅞	39	21¾	Shell-Coil	Water	....	....	Tecumseh	3	Gas	Hermetic	....	....	....	1—3	....	F-22	9	1	1200	....	1	⅓	1	Permanent	....	Steam/Water	36,000	85,500	....
5-570	84¾	45⅞	23⅝	Shell-Coil	Water	....	....	Copeland	5	Gas	Semi-Hermetic	....	....	....	1—3	....	F-12	11	1	2000	....	1	½	1	Permanent	....	Steam/Water	60,000	145,000	....
7½-570	94⅞	48⅛	26	Shell-Coil	Water	....	....	Copeland	7½	Gas	Semi-Hermetic	....	....	....	3	....	F-12	17	1	3000	....	1	¾	1	Permanent	....	Steam/Water	90,000	218,000	....
10-570	99¼	62⅛	26	Shell-Coil	Water	....	....	Copeland	(2) 5	Gas	Semi-Hermetic	....	....	....	3	....	F-12	39	1	4000	....	1	1½	1	Permanent	....	Steam/Water	120,000	294,000	....
15-570	106¼	79	31	Shell-Coil	Water	....	....	Copeland	(2) 7½	Gas	Semi-Hermetic	....	....	....	3	....	F-12	34	1	6000	....	1	2	1	Permanent	....	Steam/Water	180,000	442,000	....
*Optional. †Heating output based on 2-row steam coil on 2-lb. steam, 60° F. entering air.																														
Capitolaire—National-U. S. Radiator Corp., Johnstown, Pa.																														
COM-1W-031	72	30	42	Shell-Coil	Water	3.0	3	Tecumseh	3	Gas	Hermetic	....	....	1725	1	230	F-22	....	1	1200	....	1	⅓	1	....	19x23⅞x1	None	36,000	....	....
COM-1A-051	74⅞	40	28	Shell-Coil	Air	....	....	Tecumseh	5	Gas	Hermetic	....	....	1725	1	230	F-22	....	2	....	....	2	⅓	2	....	22x17x1	....	57,000	....	....
COM-1W-051	76	40	24	Shell-Coil	Water	5.0	3	Tecumseh	5	Gas	Hermetic	....	....	1725	1	230	F-22	....	1	2000	....	1	⅓	2	....	22x17x1	....	60,000	....	....
COM-1A-053	74⅞	40	23¾	Shell-Coil	Air	....	....	Tecumseh	5	Gas	Hermetic	....	....	1725	3	208/220	F-22	....	2	....	....	2	⅓	2	....	22x17x1	....	60,000	....	....
COM-1W-063	76	56	27	Shell-Coil	Water	6.4	4	Copeland	7½	Gas	Access. Hermetic	....	....	1725	3	208/220	F-22	....	1	3000	....	1	¾	2	....	22x17x1	....	60,000	....	....
COM-1W-103	84	72	27	Shell-Coil	Water	8.5	4	Copeland	10	Gas	Access. Hermetic	....	....	1725	3	208/220	F-22	....	1	4000	....	1	1	2	....	22x17x1	....	60,000	....	....
COM-1W-153	94	86	27	Shell-Coil	Water	12.5	4	Copeland	(2) 7½	Gas	Access. Hermetic	....	....	1725	3	208/220	F-22	....	1	6000	....	1	1½	2	....	22x17x1	....	60,000	....	....
Special Features: All equipment precharged. No special equipment needed for installation.																														
Coleman—The Coleman Co., Inc., Wichita, Kan.																														
6307	70½	29½	25½	Shell and Coil	Water	2.75	3	Tecumseh	3	Refrig.	Hermetic	2	....	1725	1—3	230	F-22	6.5	1	1200	750	1	⅓	1	Permanent	22x18x1	None	....	....	....
6308	70½	37½	27⅝	Shell and Coil	Water	4.37	4	Tecumseh	3 & 2	Refrig.	Hermetic	2 & 2	....	1725	1—3	230	F-22	7.5 & 7	1	2000	825	1	½	2	Permanent	20x15x1	None	....	....	....
Cool-Ette—Cool-Ette, Inc., Detroit																														
SC2W	70½	25	21½	Finned Coil	Water	1.75	4	Tecumseh	2	Refrig.	Sealed	2	1⅝x1.2	1725	1—3	230	F-22	2# 11 oz.	1	800	Variable	1	¼	1	Permanent	20x20x1	....	24,760	....	....
SC3W	70½	25	21½	Finned Coil	Water	2.91	4	Tecumseh	3	Refrig.	Sealed	3	2x1.2	1725	1—3	230	F-22	2# 15 oz.	1	1200	Variable	1	⅓	1	Permanent	20x20x1	....	38,650	....	....
SC5W	80½	25	25	Finned Coil	Water	4.19	4	Tecumseh	5	Refrig.	Sealed	4	1⅝x1 7/16	1725	1—3	230	F-22	2# 4 oz.	1	2000	Variable	1	½	2	Permanent	16x25x1	....	65,800	....	....
F2W	57½	25	21½	Finned Coil	Water	1.75	4	Tecumseh	2	Refrig.	Sealed	2	1⅝x1.2	1725	1—3	230	F-22	2# 11 oz.	1	800	Variable	1	¼	1	Permanent	20x20x1	....	24,760	....	....
F3W	57½	25	21½	Finned Coil	Water	2.91	4	Tecumseh	3	Refrig.	Sealed	3	2x1.2	1725	1—3	230	F-22	2# 15 oz.	1	1200	Variable	1	⅓	1	Permanent	30x20x1	....	38,650	....	....
F5W	66½	35	25	Finned Coil	Water	4.19	4	Tecumseh	5	Refrig.	Sealed	4	1⅝x1 7/16	1725	1—3	230	F-22	2# 4 oz.	1	2000	Variable	1	½	2	Permanent	16x25x1	....	65,800	....	....
Crane—Crane Co., Chicago																														
HKP 33-3T	70½	29½	25½	....	Water	....	....	....	....	....	....	....	....	....	1—3	208/220/230	....	....	1	....	....	....	....	1	Permanent	....	....	36,000	....	....
HKP 53-5T	70½	37½	28⅝	....	Water	....	....	....	....	....	....	....	....	....	1—3	208/220/230	....	....	1	....	....	....	....	1	Permanent	....	....	61,000	....	....
H86 SC-7½T	73½	37	24½	Shell & Tube	Water	4.67	6	Copeland	7½	Water	Open	3	2⅝x2	1750	3	208/220	F-12	10.5	1	2800	....	1	⅝	2	Permanent	16x25 20x25	Steam	97,500	194,000	....
H96 SC-8T	79	52	27	Shell & Tube	Water	7.87	4	Copeland	7½	Water	Open	3	2⅝x2	1750	3	208/220	F-12	14	2	3800	....	1	¾	2	Permanent	25x20	Steam	101,750	264,000	....
H116 SC-10T	79	52	27	Shell & Tube	Water	7.87	5	Tecumseh	10	Water	Open	3	3¼x3	800	3	208/220	F-12	18	2	4000	....	1	¾	2	Permanent	20x25	Steam	125,000	270,000	....
H166 SC-15T	95	63	35	Shell & Tube	Water	13.0	5	Tecumseh	15	Water	Open	3	4x4¼	570	3	208/220	F-12	32	2	6000	....	1	1½	6	Permanent	16x20	Steam	191,000	404,000	....
H216 SC-20T	95	63	35	Shell & Tube	Water	13.0	6	Tecumseh	20	Water	Open	3	4x4¼	700	3	208/220	F-12	38	2	8000	....	1	2	6	Permanent	16x20	Steam	248,000	556,000	....

Commercial

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Condenser Type	Condenser Cooling Method	Evaporator Face Area (Sq. Ft.)	Evaporator Rows	Compressor Make	Hp.	Cooling Method	Type	Cylinders	Bore & Stroke (In.)	R.p.m.	Compressor Motor Phase	Volts	Refrigerant Type	Charge (Lbs.)	Blowers No.	C.f.m.	R.p.m.	Blower Motor No.	Hp.	Air Filter No.	Type	Dimensions (In.)	Heating Type	Capacities (B.t.u.h.) Cooling	Heating	List Price
Curtis—Curtis Mfg. Co., St. Louis																														
CA-400A	84½	25	25½	Shell & Coil	Water	2.4	4	Tecumseh	3	Refrig.	Hermetic	2	2x1.2	1750	1—3	230/208/220/440	F-22	7	1	1200	840	1	¼	1	Disposable	20x20	Steam/Water	38,040	93,300	....
CA-600A	84½	38	27½	Shell & Coil	Water	4.0	4	Tecumseh	5	Refrig.	Hermetic	4	1¾x1 7/16	1750	1-2-3	220/230/440/550	F-22	10	1	2000	690	1	⅓	2	Disposable	16x20	Steam/Water	63,400	155,500	....
CA-800A	93¾	42	27½	Shell & Coil	Water	6.0	4	Copeland	7	Refrig.	Semi-Hermetic	2	2 7/16x1 13/16	1750	2—3	208/220/440/550	F-22	13	2	3000	870	1	¾	2	Disposable	1—20x25 1—16x25	Steam/Water	95,100	234,000	....
CA-1200A	98¾	54	27½	Shell & Coil	Water	8.0	4	Copeland	10	Refrig.	Semi-Hermetic	3	2 3/16x2	1750	3	208/220/440	F-22	15	2	4000	725	1	1	3	Disposable	16x25	Steam/Water	126,800	311,000	....
CA-1600A	98¾	78	28½	Shell & Coil	Water	12.0	4	Copeland	(2) 7½	Refrig.	Semi-Hermetic	2	2 7/16x1 13/16	1750	2—3	208/220/440/550	F-22	26	3	6000	780	1	1½	4	Disposable	2—16x25 2—20x25	Steam/Water	190,200	467,000	....
CA-2200A	107¾	78	33½	Shell & Coil	Water	16.0	4	Copeland	(2) 10	Refrig.	Semi-Hermetic	3	2 3/16x2	1750	3	208/220/440	F-22	30	3	8000	642	1	2	6	Disp.	4—16&20x25 2—16&20x20	Steam/Water	253,600	622,000	....
CPU2500-30	109½	104	36	Shell & Coil	Water	16.5	4	Curtis	25	Air	Open	4	5x3¾	528	2—3	208/220/440/550	F-12	70	2	8750	585	1	2	8	Permanent	16x25	Steam/Water	310,000	699,300	....
CPU-3000-30	109½	104	36	Shell & Coil	Water	20.9	4	Curtis	30	Air	Open	4	5x3¾	648	2—3	208/220/440/550	F-12	75	2	10000	595	1	3	8	Permanent	16x25	Steam/Water	385,000	766,800	....
CPU-4000-40	99	126	55½	Shell & Coil	Water	29.6	4	Curtis	40	Air	Open	4	5x3¾	850	2—3	208/220/440/550	F-12	85	3	14800	650	1	5	10	Permanent	20x25	Steam/Water	484,000	1,231,000	....
CPU-5000-50	99	126	55½	Shell & Coil	Water	35.6	4	Curtis	50	Air	Open	4	5x3¾	740	2—3	208/220/440/550	F-22	90	3	17780	630	1	7½	10	Permanent	20x25	Steam/Water	645,000	1,475,000	....
Special Features: CPU models also available with evaporative condenser. Six-row DE coil optional—25-50-75% capacity reduction and unloaded start optional—filter section.																														
Deering—The Deering Air Conditioning Co., Cincinnati																														
V3A31	57½	36	21	....	Air/Water	2.6	4	Tecumseh	3	Air	Hermetic	2	2x1.2	....	1	230	F-22	....	1	1200	650	1	⅓	1	Disposable	20x25	....	34,000*	....	....
V5A33	57½	36	24	....	Air/Water	4.4	4	Tecumseh	5	Air	Hermetic	2	2x1.2	....	3	230	F-22	....	1	2000	650	1	½	2	Disposable	20x25	....	56,000*	....	....
*36,000 and 60,000 B.t.u. on water-cooled models.																														
Dunham-Bush—Dunham-Bush, Inc., West Hartford, Conn.																														
CPU-10	65	75	45½	Evap. Cond.	Water	5.65	2	Copeland	10	Air	Semi-Hermetic	3	2 3/16x2	1750	3	220	F-22	20	1	2200	850‡	1	¾	....	Perm./Disp.	....	Steam	120,000	250,000*	$6,650.00§
CPU-15	72	75	45½	Evap. Cond.	Water	8.75	2	Brunner	15	Air	Open	4	3⅝x2¼	890	3	220	F-12	30	1	3000	950‡	1	1	....	Perm./Disp.	....	Steam	180,000	360,000*	8,680.00§
CPU-20	87	80	54½	Evap. Cond.	Water	11.80	2	Brunner	20	Air	Open	4	4¼x3	750	3	220	F-12	48	1	4400	690‡	1	1½	....	Perm./Disp.	....	Steam	240,000	470,000*	10,050.00§
CPU-30	89	131	60½	Evap. Cond.	Water	17.50	2	Brunner	30	Air	Open	4	4¼x3	610	3	220	F-22	110	1	7400	500‡	1	2	....	Perm./Disp.	....	Steam	360,000	770,000*†	13,750.00§
CPU-40	94¾	144	63½	Evap. Cond.	Water	21.65	2	Brunner	40	Air	Open	4	4¼x5	550	3	220	F-22	140	1	8200	550‡	1	3	....	Perm./Disp.	....	Steam	480,000	990,000*†	16,800.00§
*Based on 60° F. entering air temperature, 2 p.s.i.g. †Mounted external to unit. §Basic unit only. ‡At ¼ in. E.S.P.																														
Emerson-Quiet Kool—Emerson-Quiet Kool Corp., Newark, N. J.																														
SC2A	72	29½	20	Tube In Tube	Water	3.3	2	Tecumseh	2	Oil	Hermetic	2	1¾x1.2	1750	1—3	230	F-22	Less than 3	1	800	Adjustable	1	¼	1	Disposable	16x25x1	None	24,000	....	$780.00*
SC3A	72	29½	20	Tube In Tube	Water	3.3	3	Tecumseh	3	Oil	Hermetic	2	1 15/16x1.2	1750	1—3	230	F-22	Less than 3	1	1120	Adjustable	1	⅓	1	Disposable	16x25x1	None	36,500	....	890.00*
*$30 less for 3-phase units.																														
Floatingair—Friedrich Refrigerators, Inc., San Antonio, Texas																														
C301-3W	78	24	26⅞	Counterflow	Water	2.50	4	Tecumseh	3	Suction	Sealed	2	1 15/16x3	1750	1—3	230/220	F-22	6	1	1200	890	1	⅓	1	Permanent	20x25x1	....	36,000	....	....
C501-3W	85½	42¼	29½	Tube	Water	4.86*	2	Copeland	5	Suction	Semi-Sealed	2	2½x1 13/16	1750	1—3	230/220	F-12	8	4	2000	770	1	½	2	Permanent	17¾x23x1	....	60,000	....	....
C753-W	85½	42¼	29½	Tube	Water	5.46*	2	Copeland	7½	Suction	Semi-Sealed	2	2⅝x2	1750	3	220	F-12	12	1	2850	670	1	¾	2	Permanent	17¾x23x1	....	90,000	....	....
C301-3A	78	24	26⅞	Finned Tube	Air	2.50	4	Tecumseh	3	Suction	Sealed	2	1 15/16x3	1750	1—3	230/220	F-22	Holding	1	1200	890	1	⅓	1	Permanent	20x25x1	....	30-35,000†	....	....
C501-3A	85½	42¼	29½	Finned Tube	Air	4.86*	2	Copeland	5	Suction	Semi-Sealed	2	2½x1 13/16	1750	1—3	230/220	F-12	Holding	1	2000	770	1	½	2	Permanent	17¾x23x1	....	55-62,000†	....	....
C753-A	85½	42¼	29½	Finned Tube	Air	5.46*	2	Copeland	7½	Suction	Semi-Sealed	2	2⅝x2	1750	3	220	F-12	Holding	1	2850	670	1	¾	2	Permanent	17¾x23x1	....	83,500	....	....
*These models use an inner fin evaporator coil. †These units are available with two sizes of air-cooled condensers, capacities listed are at 95°/80°/50%. Special Features: Units are equipped with low-voltage, remote thermostat. Water-cooled condensers have very low pressure drop.																														
Fresh'nd-Aire—Fresh'nd-Aire Co., Div. of Cory Corp., Chicago																														
FS201-3	78½	31¼	24	Tube In Tube	Water	3.06	3	Tecumseh	2	Suction	Hermetic	2	1¾x1.2	1725	1—3	230/208/220	....	.3.2	1	800	710	1	¼	1	Disposable	20x22¼x1	....	....	....	....
FS301-3	78½	31¼	24	Tube In Tube	Water	3.06	4	Tecumseh	3	Suction	Hermetic	2	2x1.2	1725	1—3	230/208/220	....	5.0	1	1200	750	1	⅓	1	Disposable	20x22¼x1	....	....	....	....
FS501-3	86¼	41	26½	Shell & Tube	Water	4.45	3	Tecumseh	5	Suction	Hermetic	4	1¾x1 7/16	1725	1—3	230/208/220	....	6.6	2	2000	740	1	½	2	Disposable	16x20x1	....	....	....	....
Frick—Frick Co., Waynesboro, Pa.																														
#300	81	38	24⅝	Shell & Coil	Water	3.26	4	....	3	Water	Access. Hermetic	2	2¼x1 7/16	1750	3	220	F-12	8	1	1300	775	1	⅓	1	Permanent	15x29	Steam	39,000	96,200	....
#520	86⅝	42	27¼	Double Tube	Water	5.16	4	....	5	Refrig.	Sealed Hermetic	4	1¾x1 7/16	1750	3	220	F-22	8	1	2000	640	1	½	1	Permanent	25x30	Steam	62,000	164,200	....
#750	88⅝	55	27¼	Double Tube	Water	7.33	4	....	7½	Refrig.	Access. Hermetic	3	2⅝x2	1750	3	220	F-12	14	1	3000	748	1	¾	2	Permanent	20x24	Steam	92,350	235,500	....
Frigidaire—Frigidaire Div., General Motors Corp., Dayton																														
ASW-300	81	40	22⅝	Shell and Coil	Water*	2.85	4	Frigidaire	3	Gas	Sealed Recip.	2	2⅜x1⅝	1725	1—3	208/220/230/440	F-12	9½	1	1260	815	1	⅓	1	Permanent	29¾x15¼x1	Steam/Water	36,500	80,000*	....
ASW-500	88⅝	40	28	Shell and Coil	Water*	4.20	4	Frigidaire	5	Gas	Sealed Recip.	2	2⅝x2⅝	1725	1—3	208/220/230/440	F-12	8	1	2000	845	1	½	1	Permanent	29¾x22¼x1	Steam/Water	60,100	135,000*	....
ASW-750	88⅝	40	28	Shell and Coil	Water*	5.95	5	Frigidaire	7½	Gas	Sealed Recip.	3	2⅝x2⅝	1725	3	208/220/440	F-12	16	[illegible]	2700	1040	1	¾	1	Permanent	29¾x29¾x1	Steam/Water	92,000	164,000*	....
ASW-1000	93⅝	67	29½	Shell and Coil	Water*	(2)4.7	(2)4	Frigidaire	(2) 5	Gas	Sealed Recip.	(2) 2	2⅝x2⅝	1725	3	208/220/440	F-12	(2) 9	2	4000	760	1	1½	3	Permanent	20 x25 x1	Steam/Water	120,500	264,000*	....
ASW-1500	93⅝	67	29½	Shell and Coil	Water*	(2)6.1	(2)4	Frigidaire	(2) 7½	Gas	Sealed Recip.	(2) 3	2⅝x2⅝	1725	3	208/220/440	F-12	(2) 16	2	5300	700	1	2	3	Permanent	20 x25 x1	Steam/Water	177,500	320,000*	....
*Models available less water-cooled condenser for air-cooled application. *Steam (heating optional).																														
Genatron—General Air Conditioning Corp., Los Angeles																														
FL-2	43	30	21	Fin & Tube	Air	1.77	2	Tecumseh	2	Suction	Hermetic*	2	1¾x1.2	1725	1	208/220	F-22	....	1	900	....	1	⅙	1	Permanent	9x30	....	24,000	....	....
RO-26	34	30	21	Fin & Tube	Air	1.77	2	Tecumseh	2	Suction	Hermetic	2	1¾x1.2	1725	1	208/220	F-22	....	1	1000	....	1	⅙	1	Permanent	9x30	Electric	24,000	35,500	....
RO-31HP	40	30	25	Fin & Tube	Air	2.8	4	Tecumseh	3	Suction	Hermetic	2	2x1.2	1725	1—3	208/220	F-22	....	1	1400	....	1	¼	2	Permanent	15x16	Electric	37,700	66,700	....
RO-535A	57	40	26	Fin & Tube	Air*	4.5	4	Tecumseh	5	Suction	Hermetic	4	1¾x1 7/16	1725	1—3	208/220	F-22	....	1	1800-2400	....	1	¾	2	Permanent	20x20	Electric	65,500	74,000	....
RO-10	73	66	30	Fin & Tube	Air	9.4	6	Tecumseh	10	Suction	Hermetic	4	1¾x1 7/16	1725	3	208/220	F-22	....	1	3600-4800	....	1	1½	3	Permanent	20x20	Electric	131,000	148,000	....
*Also available water cooled. Special Features: Heating by heat pump and auxiliary electric heaters at 30° outdoor temperature.																														
General Electric—General Electric Co., Bloomfield, N. J.																														
FCA30B	28⅝	34	90⅝*	Fin & Tube	Air	3.2	3	General Electric	5	Refrig.	Hermetic	3	....	1725	1—3	208/220/230/440	F-12	10¼	1	1200	Var.	1	⅓	3	Disposable	16x20x1	Steam/Water	36,000	68,500	....
FCA50B	28⅝	55	90⅝*	Fin & Tube	Air	5.3	6	General Electric	7½	Refrig.	Hermetic	3	....	1725	3	208/220/440	F-22	16	1	2000	Var.	1	½	3	Disposable	20x25x1	Steam/Water	60,000	121,000	....
FCW30B	28⅝	34	56½*	Shell/Coil	Water	3.2	3	General Electric	3	Refrig.	Hermetic	2	....	1725	1—3	208/220/230/440	F-12	12	1	1200	Var.	1	⅓	3	Disposable	16x20x1	Steam/Water	36,000	68,500	....
FCW50B	28⅝	55	56½*	Shell/Coil	Water	5.3	3	General Electric	5	Refrig.	Hermetic	3	....	1725	1—3	208/220/230/440	F-12	11	1	2000	Var.	1	½	3	Disposable	20x25x1	Steam/Water	60,000	121,000	....
FCW75B	28⅝	55	56½*	Shell/Coil	Water	6.6	4	General Electric	7½	Refrig.	Hermetic	3	....	1725	3	208/220/440/550	F-22	10	1	3000	Var.	1	¾	3	Disposable	2—16x25x1 20x25x1	Steam/Water	90,000	165,000	....
FD30G	82¼	34	21⅝	Shell/Coil	Water	3.00	3	General Electric	3	Refrig.	Hermetic	2	....	1725	1—3	208/220/230/440	F-12	6½	1	1200	Var.	1	¼	3	Disposable	16x20x1	Steam/Water	36,000	17,300	....
FD50G	82½	45	22¼	Shell/Coil	Water	4.97	3	General Electric	5	Refrig.	Hermetic	3	....	1725	1—3	208/220/230/440	F-12	9	2	2000	Var.	1	½	3	Disposable	20x25x1	Steam/Water	60,000	120,000	....
FD75G	89½	45	22¾	Shell/Coil	Water	6.25	4	General Electric	7½	Refrig.	Hermetic	3	....	1725	3	208/220/440/550	F-22	9	2	3000	Var.	1	1	4	Disposable	2—16x20x1 16x25x1	Steam/Water	90,000	177,500	....
FD100G	92⅝	55	28½	Shell/Coil	Water	10.2	3	General Electric	(2) 5	Refrig.	Hermetic	(2) 2	....	1725	3	208/220/440/550	F-12	18	2	4000	Var.	1	2	4	Disposable	25x16x1	Steam/Water	120,000	242,000	....
FD150G	91	77	28½	Shell/Coil	Water	15.4	3	General Electric	(2) 7½	Refrig.	Hermetic	(2) 3	....	1725	3	208/220/440/550	F-22	19	2	6000	Var.	1	3	6	Disposable	16x25x1	Steam/Water	180,000	358,000	....
*With discharge air distributor.																														
Hastings—Hastings Air Conditioning Co., Inc., Hastings, Neb.																														
KP-15B	32½	40¼	16¼	Co-Axial	Water	3.0	6	Tecumseh	1½	Suction	Reciprocating	....	....	....	....	....	F-22	1 15/16	2	1200	850	1	⅓	2	Disposable	16x20x2	....	3.0*	....	$1,300.00
DKP-30	79½	48	27	Co-Axial	Water	4.0	6	Tecumseh	3	Suction	Reciprocating	....	....	....	1—3	230	F-22	4⅛	1	2000	835	1	¾	3	Disposable	16x23x2	Steam/Water	5.5†	180,000	2,125.00
DK-50	97¼	51	29	Co-Axial	Water	6.3	6	Tecumseh	5	Suction	Reciprocating	....	....	....	3	230	F-22	6½	1	3500	910	1	1½	3	Disposable	15x31x1	....	9.0‡	....	2,960.00
*Based on 95-75 air—4 g.p.m. of 65° water. †Based on 95-75 air—6 g.p.m. of 65° water. ‡Based on 85-70 air—10 g.p.m. of 65° water. Special Features: Double cool principle—uses water twice—first as a pre-cool, then through condenser.																														
Janitrol—Surface Combustion Corp., Columbus, Ohio																														
SAC24-45	88½	26½	26	Tube In Tube	Water	2.12	3	Tecumseh	2	Refrig.	Hermetic	2	1.75x1.2	1725	1	230	F-22	2.7	1	800	790	1	¼	1	Disposable	20x25x1	....	26,800	....	....
SAC36-45	88½	26½	26	Tube In Tube	Water	2.53	4	Tecumseh	3	Refrig.	Hermetic	2	2x1.2	1725	1—3	230/208/220	F-22	2.9	1	1200	875	1	⅓	1	Disposable	20x25x1	....	36,900	....	....
SAC60-45	88½	40½	26	Tube In Tube	Water	4.15	4	Tecumseh	(2 & 3) 5	Refrig.	Hermetic	2-2	1.75x1.2 2x1.2	1725	1—3	230/208/220	F-22	2.7 2.9	1	2000	900	1	¾	2	Disposable	16x25x1 20x25x1	....	63,700	....	....
SVW60S-55	88½	40½	26	Tube In Tube	Water	4.15	4	Tecumseh	5	Refrig.	Hermetic	4	1.75x1.44	1725	3	208/220	F-22	4.5	1	2000	900	1	¾	2	Disposable	16x25x1 20x25x1	....	68,300	....	....
Jettronaire—Jettronaire, Inc., Pittsburgh																														
H46SC†	87½	37	24½	Tube In Tube	Water	2.81	4	Tecumseh	3	Refrig.	Hermetic	2	2x1.2	1750	1—3	230/208/220	F-22	6½	1	1200	Variable	1	¼	2	Disposable	16x25x1 20x25x1	Optional	37,000	....	....
H66SC†	87½	37	24½	Tube In Tube	Water	4.67	4	Copeland	5	Refrig.	Access. Hermetic	2	2½x1 13/16	1750	1—3	230/208/220	F-12	8½	1	2000	Variable	1	⅓	2	Disposable	16x25x1 20x25x1	Optional	60,600	....	....
H86SC†	87½	37	24½	Tube In Tube	Water	4.67	6	Copeland	7½	Refrig.	Access. Hermetic	3	2⅝x2	1750	3	208/220	F-12	10½	1	2800	Variable	1	¾	2	Disposable	16x25x1 20x25x1	Optional	97,500	....	....
H96SC†	95⅝	52	27	Tube In Tube	Water	7.87	4	Copeland	7½	Refrig.	Access. Hermetic	3	2⅝x2	1750	3	208/220	F-12	14	2	3800	Variable	1	¾	2	Disposable	25x20x1	Optional	101,750	....	....
H116SC†	95⅝	52	27	Tube In Tube	Water	12.0	5	Copeland	10	Refrig.	Access. Hermetic	3	2 3/16x2	1750	3	208/220	F-22	16	2	4000	Variable	1	¾	2	Disposable	25x20x1	Optional	125,000	....	....
H166SC†	117	62	35	Tube In Tube	Water	12.0	5	Copeland	(2) 7½	Refrig.	Access. Hermetic	3 ea.	2⅝x2	1750	3	208/220	F-12	21	2	6000	Variable	1	1½	6	‡Permanent	16x20x2	Optional	191,000	....	....
H216SC†	117	62	35	Tube In Tube	Water	12.0	6	Copeland	(2) 10	Refrig.	Access. Hermetic	3 ea.	2 3/16x2	1750	3	208/220	F-22	32	2	8000	Variable	1	2	8	‡Permanent	16x20x2	Optional	248,000	....	....
266SC†	119	62	35	Shell & Tube	Water	13.0	8	Schnacke	25	Air	Open	4	3 3/32x3¾	1400	3	208/220	F-12	42	2	8000	Variable	1	3	8	‡Permanent	16x20x2	Optional	310,000	....	....
H316SC†	92*	84	45	Tube In Tube	Water	21.0	6	Copeland	(3) 10	Refrig.	Access. Hermetic	3 ea.	2 3/16x2	1750	3	208/220	F-22	48	2	12000	Variable	1	5	8	Permanent	20x25x2	Optional	396,000	....	....
416SC†	92*	84	45	Shell & Tube	Water	21.0	8	Brunner	40	Air	Open	4	4¼x5	890	3	208/220	F-12	72	2	12000	Variable	1	5	8	Permanent	20x25x2	Optional	492,000	....	....
*Plenum not available. †Remote air-cooled condensers available up to H116SC, available in multiples on other models. ‡Disposable type filters also available.																														
Kauffman—Kauffman Air Conditioning Co., St. Louis																														
30	82	36	24	Shell and Coil	Water	2.4	4	Tecumseh	3	Water	Hermetic	2	2x1.2	1750	3	220	F-22	7	1	1200	850	1	⅓	1	Disposable	20x20	Steam	36,000	91,000	$1,428.00
50	84	38	28	Shell and Coil	Water	4.00	4	Tecumseh	5	Water	Hermetic	4	1¾x1 7/16	1750	3	220	F-22	10	1	2000	700	1	½	2	Disposable	16x20	Steam	60,000	153,000	1,920.00
75	94	42	28	Shell and Coil	Water	6.00	4	Copeland	7½	Water	Hermetic	2	2 7/16x1 13/16	1750	3	220	F-22	13	2	3000	500	1	¾	2	Disposable	18x25	Steam	90,000	232,000	2,450.00
100	99	48	28	Shell and Coil	Water	8.00	4	Copeland	10	Water	Hermetic	3	2 3/16x2	1750	3	220	F-22	15	2	4000	725	1	1	3	Disposable	16x25	Steam	120,000	274,000	3,840.00
150	99	78	29	Shell and Coil	Water	12.00	4	Copeland	(2) 7½	Water	Hermetic	2	2 7/16x1 13/16	1750	3	220	F-22	26	3	6000	790	1	1½	5	Disposable	18x25	Steam	180,000	385,000	4,800.00
200	108	78	32	Shell and Coil	Water	16.0	4	Copeland	(2) 10	Water	Hermetic	3	2 13/16x2	1750	3	220	F-22	30	3	8000	650	1	2	6	Disposable	18x25	Steam	240,000	455,000	5,460.00
Heating Output—2 lbs. at 70°																														
Lennox—Lennox Industries, Inc., Marshalltown, Iowa																														
CU11-3	82¼	31⅝	21	Tube In Tube	Water	2.94	3	Tecumseh	3	Refrig.	Hermetic	2	2x1.2	1725	1—3	208/220/230	F-22	3.62	1	1200	722-888	1	⅓	1	Permanent	20x36	....	36,000	....	....
CU11-5	85⅝	30⅝	29⅝	Tube In Tube	Water	4.4	4	Tecumseh	5	Refrig.	Hermetic	4	1¾x1 7/16	1725	1—3	208/220/230	F-22	7.0	1	2000	722-888	1	½	1	Permanent	25x25	....	60,000	....	....
Majestic—The Majestic Co., Inc., Huntington, Ind.																														
F-2	82¼	22	22	Fin & Tube	Water	....	4	Tecumseh	2	....	....	....	....	....	....	....	F-22	2.5	1	800	....	1	¼	....	Disposable	....	....	24,000	....	....
F-3	86⅝	26	26	Fin & Tube	Water	....	4	Tecumseh	3	....	....	....	....	....	....	....	F-22	3.0	1	1200	....	1	⅓	....	Disposable	....	....	36,000	....	....
F-4	86½	28½	29½	Fin & Tube	Water	....	4	Tecumseh	5	....	....	....	....	....	....	....	F-22	5.6	1	2000	....	1	½	....	Disposable	....	....	60,000	....	....
Marvair—Muncie Gear Works, Inc., Muncie, Ind.																														
402XP1A	88⅝	26	26	Tube & Shell	Water	....	4	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
405XP1A	88⅝	26	26	Tube & Shell	Water	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....

Commercial

McMillan Comfortaire—McMillan Comfortaire Heat Pumps, Inc., Jacksonville, Fla.

Model No.	Cabinet Height (In.)	Cabinet Width (In.)	Cabinet Depth (In.)	Condenser Type	Condenser Cooling Method	Evaporator Face Area (Sq. Ft.)	Evaporator Rows	Compressor Make	Hp.	Cooling Method	Type	Cylinders	Bore & Stroke (In.)	R.p.m.
20-1	58⅝	26⅝	22¼	Shell & Tube	Water	1.9	6	Copeland	2	Refrig.	Semi-Hermetic	2	1 15/16x1¾	1750
30-1	68¼	32⅞	22¼	Shell & Tube	Water	3.1	6	Copeland	3	Refrig.	Semi-Hermetic	2	2⅛x1 7/16	1750
50-1	71½	43¼	24⅞	Shell & Tube	Water	5.1	6	Copeland	5	Refrig.	Semi-Hermetic	3	2⅛x1 7/16	1750
75-1	71	56	27⅞	Shell & Tube	Water	7.3	6	Copeland	7½	Refrig.	Semi-Hermetic	3	2⅝x2	1750
100-1 (Sgl.)	85⅞	57⅞	29⅝	Shell & Tube	Water	10.1	6	Copeland	10	Refrig.	Semi-Hermetic	3	2 3/16x2	1750
100-1 (Dual)	85⅞	57⅞	29⅝	Shell & Tube	Water	10.1	6	Copeland	10	Refrig.	Semi-Hermetic	(2) 2	2⅛x1 7/16	1750
150-1	83	80	34	Shell & Tube	Water	14.9	6	Copeland	15	Refrig.	Semi-Hermetic	(2) 3	2⅝x2	1750
200-1	92¼	80	44	Shell & Tube	Water	20.6	6	Copeland	20	Refrig.	Semi-Hermetic	(2) 3	2 3/16x2	1750

Model No.	Compressor Phase	Motor Volts	Refrigerant Type	Charge (Lbs.)	Blowers No.	Blowers C.f.m.	Blowers R.p.m.	Blower Motor No.	Blower Motor Hp.	Air Filter No.	Air Filter Type	Air Filter Dimensions (In.)	Heating Type	Capacity Cooling (B.t.u.h.)	Capacity Heating (B.t.u.h.)	List Price
20-1	1	230	F-12	9	1	800	Adjustable	1	¼	1	Disposable	20x15x1	Heat Pump	24,300	34,200	...
30-1	1	230	F-12	18	1	1200	Adjustable	1	⅓	1	Disposable	25x20x1	Heat Pump	37,200	47,400	...
50-1	3	220	F-12	26	1	2000	Adjustable	1	½	2	Disposable	20x16x1 20x20x1	Heat Pump	60,800	78,700	...
75-1	3	220	F-12	39	2	3000	Adjustable	1	¾	2	Disposable	25x20x1	Heat Pump	94,700	117,300	...
100-1 (Sgl.)	3	220	F-22	60	3	3000	Adjustable	1	1	4	Disposable	2—25x16x1 2—20x16x1	Heat Pump	121,600	158,100	...
100-1 (Dual)	3	220	F-12	54	2	4000	Adjustable	1	1	4	Disposable	2—25x16x1 2—20x16x1	Heat Pump	121,600	158,100	...
150-1	3	220	F-12	80	2	6000	Adjustable	1	2	6	Disposable	4—20x20x1 2—25x20x1	Heat Pump	189,400	231,000	...
200-1	3	220	F-22	120	2	8000	Adjustable	1	3	6	Disposable	4—25x20x1 2—20x20x1	Heat Pump	242,600	316,100	...

Special Features: All McMillan Comfortaire Heat Pumps carry a money-back guarantee and five-year warranty on the compressor, water coil, and air coil.

Melco—Melchior, Armstrong, Dessau Co., Ridgefield, N. J.

Model No.	Cabinet Height (In.)	Cabinet Width (In.)	Cabinet Depth (In.)	Condenser Type	Condenser Cooling Method	Evaporator Face Area (Sq. Ft.)	Evaporator Rows	Compressor Make	Hp.	Cooling Method	Type	Cylinders	Bore & Stroke (In.)	R.p.m.
MC-37	83½	36	23⅝	Tube In Tube	Water	2.92	4	Copeland	3	Gas	Semi-Hermetic	2	2¼x1 7/16	1750
MC-57	91½	42	24⅝	Tube In Tube	Water	4.43	4	Copeland	5	Gas	Semi-Hermetic	2	2½x1 13/16	1750
MC-88	91½	42	24⅝	Tube In Tube	Water	6.02	4	Copeland	7½	Gas	Semi-Hermetic	2	2½x1 13/16	1750

Model No.	Compressor Phase	Motor Volts	Refrigerant Type	Charge (Lbs.)	Blowers No.	Blowers C.f.m.	Blowers R.p.m.	Blower Motor No.	Blower Motor Hp.	Air Filter No.	Air Filter Type	Air Filter Dimensions (In.)	Heating Type	Capacity Cooling (B.t.u.h.)	Capacity Heating (B.t.u.h.)	List Price
MC-37	1—3	208/230	F-12	5½	1	1200	...	1	⅓	2	Disposable	16x20x1	Steam	35,900	78,000	...
MC-57	1—3	208/230	F-12	8	1	2000	...	1	½	2	Disposable	20x25x1	Steam	59,000	130,000	...
MC-88	3	208/230	F-22	8½	1	3000	...	1	¾	2	Disposable	20x25x1	Steam	89,000	190,000	...

Mitchell—Mitchell Mfg. Co., Chicago

Model No.	Cabinet Height (In.)	Cabinet Width (In.)	Cabinet Depth (In.)	Condenser Type	Condenser Cooling Method	Evaporator Face Area (Sq. Ft.)	Evaporator Rows	Compressor Make	Hp.	Cooling Method	Type	Cylinders	Bore & Stroke (In.)	R.p.m.
S-200	78⅛	31¼	24	Tube In Tube	Water	3.06	3	Tecumseh	2	Gas	Hermetic	2	1⅜x1.2	1725
S-300	78⅛	31¼	24	Tube In Tube	Water	3.06	4	Tecumseh	3	Gas	Hermetic	2	2x1.2	1725
S-500	86⅛	41	36½	Shell & Tube	Water	4.45	3	Tecumseh	5	Gas	Hermetic	4	1⅜x1 7/16	1725
SA-200	78⅛	31¼	24	Fin Coil	Air	3.06	3	Tecumseh	2	Gas	Hermetic	2	1⅜x1.2	1725
SA-300	78⅛	31¼	24	Fin Coil	Air	3.06	4	Tecumseh	3	Gas	Hermetic	2	2x1.2	1725
SA-500	86¼	41	36½	Fin Coil	Air	4.45	3	Tecumseh	5	Gas	Hermetic	4	1⅜x1 7/16	1725

Model No.	Compressor Phase	Motor Volts	Refrigerant Type	Charge (Lbs.)	Blowers No.	Blowers C.f.m.	Blowers R.p.m.	Blower Motor No.	Blower Motor Hp.	Air Filter No.	Air Filter Type	Air Filter Dimensions (In.)	Heating Type	Capacity Cooling (B.t.u.h.)	Capacity Heating (B.t.u.h.)	List Price
S-200	1—3	230/220	F-22	3.2	1	800	750	1	¼	1	Disposable	22¼x20x1	...	27,600	...	...
S-300	1—3	230/220	F-22	5.0	1	1200	750	1	⅓	1	Disposable	22¼x20x1	...	38,400	...	...
S-500	1—3	230/220	F-22	6.6	1	2000	750	2	½	2	Disposable	16x20x1	...	63,600	...	...
SA-200	1—3	230/220	F-22	3	1	800	750	2	¼	1	Disposable	22¼x20x1	...	22,800	...	...
SA-300	1—3	230/220	F-22	3	1	1200	750	2	⅓	1	Disposable	22¼x20x1	...	33,600	...	...
SA-500	1—3	230/220	F-22	3	1	2000	750	2	½	2	Disposable	16x20x1	...	57,600	...	...

Mor-Sun—Morrison Steel Products, Inc., Buffalo

Model No.	Cabinet Height (In.)	Cabinet Width (In.)	Cabinet Depth (In.)	Condenser Type	Condenser Cooling Method	Evaporator Face Area (Sq. Ft.)	Evaporator Rows	Compressor Make	Hp.	Cooling Method	Type	Cylinders	Bore & Stroke (In.)	R.p.m.
MSA-200	78⅛	31¼	24	...	Air	3.06	3	Tecumseh	2	Refrig.	Hermetic	2	1.75x1.2	1725
MSA-300	78⅛	31¼	24	...	Air	3.06	4	Tecumseh	3	Refrig.	Hermetic	2	2x1.2	1725
MSA-500	78⅛	44¾	24	...	Air	4.82	4	Tecumseh	5	Refrig.	Hermetic	4	1.75x1 7/16	1725
MS-200	78⅛	31¼	24	Cleanable	Water	3.06	3	Tecumseh	2	Refrig.	Hermetic	2	1.75x1.2	1725
MS-300	78⅛	31¼	24	Cleanable	Water	3.06	4	Tecumseh	3	Refrig.	Hermetic	2	2x1.2	1725
MS-500	78⅛	44¾	24	Cleanable	Water	4.82	4	Tecumseh	5	Refrig.	Hermetic	4	1.75x1 7/16	1725
MWC-200	70	29	23	Tube In Tube	Water	3.06	3	Tecumseh	2	Refrig.	Hermetic	2	1.75x1.2	1725
MWC-300	70	29	23	Tube In Tube	Water	3.06	4	Tecumseh	3	Refrig.	Hermetic	2	2x1.2	1725
MWC-500	84	40	25	Tube In Tube	Water	4.82	4	Tecumseh	5	Refrig.	Hermetic	4	1.75x1 7/16	1725

Model No.	Compressor Phase	Motor Volts	Refrigerant Type	Charge (Lbs.)	Blowers No.	Blowers C.f.m.	Blowers R.p.m.	Blower Motor No.	Blower Motor Hp.	Air Filter No.	Air Filter Type	Air Filter Dimensions (In.)	Heating Type	Capacity Cooling (B.t.u.h.)	Capacity Heating (B.t.u.h.)	List Price
MSA-200	1—3	230	F-22	Varies	1	800	...	1	¼	1	Disposable	20x22x1	...	22,800	...	$1,690.00
MSA-300	1—3	230	F-22	Varies	1	1200	...	1	⅓	1	Disposable	20x22x1	...	33,600	...	1,730.00
MSA-500	1—3	230	F-22	Varies	2	2000	...	1	½	2	Disposable	22x16¼x1	...	58,600	...	2,230.00
MS-200	1—3	230	F-22	4.75	1	800	...	1	¼	1	Disposable	20x22x1	...	27,600	...	1,690.00
MS-300	1—3	230	F-22	5.75	1	1200	...	1	⅓	1	Disposable	20x22x1	...	38,400	...	1,760.00
MS-500	1—3	230	F-22	12.0	2	2000	...	1	½	2	Disposable	22x16¼x1	...	63,600	...	2,320.00
MWC-200	1—3	230	F-22	4.75	1	800	...	1	¼	1	Disposable	20x22x1	...	27,600	...	1,325.00
MWC-300	1—3	230	F-22	5.75	1	1200	...	1	⅓	1	Disposable	20x22x1	...	38,400	...	1,425.00
MWC-500	1—3	230	F-22	12.0	2	2000	...	1	½	2	Disposable	22x16¼x1	...	63,600	...	2,105.00

Mueller Climatrol—Mueller Climatrol Div. of Worthington Corp., Milwaukee

Model No.	Cabinet Height (In.)	Cabinet Width (In.)	Cabinet Depth (In.)	Condenser Type	Condenser Cooling Method	Evaporator Face Area (Sq. Ft.)	Evaporator Rows	Compressor Make	Hp.	Cooling Method	Type	Cylinders	Bore & Stroke (In.)	R.p.m.
904-3	84⅜	37	21	Shell and Coil	Water*	3.84	3	Worthington	3	Suction	Semi-Hermetic	3	1 15/16x1 7/16	1725
904-5	88⅜	48	21	Shell and Coil	Water*	5.22	3	Worthington	5	Suction	Semi-Hermetic	3	1 15/16x1 7/16	1725
904-7	88⅜	58¼	23⅝	Shell and Coil	Water*	8.38	3	Worthington	7½	Suction	Semi-Hermetic	3	2¼x1⅝	1725
904-10	96⅜	82	31	Shell and Coil	Water*	12.00	3	Worthington	(2) 5	Suction	Semi-Hermetic	3	1 15/16x1 7/16	1725
904-15	96⅜	82	31	Shell and Coil	Water*	13.00	4	Worthington	(2) 7½	Suction	Semi-Hermetic	3	2¼x1⅝	1725

Model No.	Compressor Phase	Motor Volts	Refrigerant Type	Charge (Lbs.)	Blowers No.	Blowers C.f.m.	Blowers R.p.m.	Blower Motor No.	Blower Motor Hp.	Air Filter No.	Air Filter Type	Air Filter Dimensions (In.)	Heating Type	Capacity Cooling (B.t.u.h.)	Capacity Heating (B.t.u.h.)	List Price
904-3	(1) 3†	220/208	R-12	9	1	1200	650	1	⅓	2	Disposable	16x20x1	Steam/Water	36,050	118,200‡	...
904-5	(1) 3†	220/208	R-12	13	1	2000	840	1	½	2	Disposable	20x20x1	Steam/Water	60,000	184,000‡	...
904-7	(1) 3	220/208	R-22	14	2	3000	850	1	¾	3	Disposable	16x25x1	Steam/Water	92,500	259,000‡	...
904-10	(1) 3	220/208	R-22	26	2	4000	840	1	1½	8	Disposable	4—16x20x1 4—20x20x1	Steam/Water	120,000	332,000‡	...
904-15	(1) 3	220/208	R-22	28	2	6000	760	1	2	8	Disposable	4—16x20x1 4—20x20x1	Steam/Water	180,000	411,000‡	...

*Convertible to air cooled. (1)Available in 3 phase, 440 or 550 volt on special order. †Also available in single phase, 230 volt. ‡At 2 lb. steam, 40° entering air.

Patten—J. V. Patten Co., Sycamore, Ill.

Model No.	Cabinet Height (In.)	Cabinet Width (In.)	Cabinet Depth (In.)	Condenser Type	Condenser Cooling Method	Evaporator Face Area (Sq. Ft.)	Evaporator Rows	Compressor Make	Hp.	Cooling Method	Type	Cylinders	Bore & Stroke (In.)	R.p.m.
3-H-761*	87½	37	22½	...	Water	4.67	6	Copeland	7½	Water	Access. Hermetic	3	2⅝x2	1750
3-H-961*	96⅝	52	27	...	Water	7.87	4	Copeland	7½	Water	Access. Hermetic	3	2⅝x2	1750
3-H-1061*	96⅝	52	27	...	Water	7.87	5	Tecumseh	10	Water	Open	3	3¼x3	800
3-H-1561	117	62	33	...	Water	13.0	5	Tecumseh	15	Water	Open	3	4x4¼	570
3-H-2061	117	62	33	...	Water	13.0	6	Tecumseh	20	Water	Open	3	4x4¼	760

Model No.	Compressor Phase	Motor Volts	Refrigerant Type	Charge (Lbs.)	Blowers No.	Blowers C.f.m.	Blowers R.p.m.	Blower Motor No.	Blower Motor Hp.	Air Filter No.	Air Filter Type	Air Filter Dimensions (In.)	Heating Type	Capacity Cooling (B.t.u.h.)	Capacity Heating (B.t.u.h.)	List Price
3-H-761*	3	208/220/440	F-12	10½	1	2800	...	1	¾	1	Permanent	30x25x1	Steam/Water	97,500	194,000	...
3-H-961*	3	208/220/440	F-12	14	2	3800	...	1	¾ or 1	2	Permanent	25x20x1	Steam/Water	101,750	264,000	...
3-H-1061*	3	208/220/440	F-12	18	2	4000	...	1	¾ or 1	2	Permanent	25x20x1	Steam/Water	125,000	270,000	...
3-H-1561	3	208/220/440	F-12	32	2	6000	...	1	1½	6	Permanent	16x20x2	Steam/Water	191,000	404,000	...
3-H-2061	3	208/220/440	F-12	38	2	8000	...	1	2	6	Permanent	16x20x2	Steam/Water	248,000	556,000	...

*Also available in air-cooled models.

Perfection—Perfection Industries, Div. of Hupp Corp., Cleveland

Model No.	Cabinet Height (In.)	Cabinet Width (In.)	Cabinet Depth (In.)	Condenser Type	Condenser Cooling Method	Evaporator Face Area (Sq. Ft.)	Evaporator Rows	Compressor Make	Hp.	Cooling Method	Type	Cylinders	Bore & Stroke (In.)	R.p.m.
PKP31C*	70½	29½	25	Tube & Tube	Water	2.75	3	Tecumseh	3	Gas	Hermetic	2	1.2x2	1725
PKP51C†	70½	37⅝	28⅝	Tube & Tube	Water	4.23	4	Tecumseh	5	Gas	Hermetic	4	1⅝x1 7/16	1725
PKP83C	88	48½	31	Tube & Tube	Water	6.5	4	Tecumseh	5 & 3	Gas	Hermetic	4 & 2	1⅝x1 7/16, 1.2x2	1725
PH116SC	95⅝	52	37	Shell & Tube	Water	7.87	5	Copeland	10	Gas	Hermetic	2 ea.	2 3/16x2	1750
PH166SC	117	62	35	Shell & Tube	Water	13.0	5	Copeland	(2) 7½	Gas	Hermetic	3 ea.	2⅝x2	1750
PH216SC	117	62	35	Shell & Tube	Water	13.0	6	Copeland	(2) 10	Gas	Hermetic	3 ea.	2 3/16x2	1750
P266SC	119	62	35	Shell & Tube	Water	13.0	8	Schnacke	25	Gas	Open	4	3 3/32x3¾	1400
PH316SC	93	84	45	Shell & Tube	Water	21.0	6	Copeland	(3) 10	Gas	Hermetic	3 ea.	2 3/16x2	1750
P416SC	92	84	45	Shell & Tube	Water	21.0	8	Brunner	40	Gas	Open	4	4¼x5	890

Model No.	Compressor Phase	Motor Volts	Refrigerant Type	Charge (Lbs.)	Blowers No.	Blowers C.f.m.	Blowers R.p.m.	Blower Motor No.	Blower Motor Hp.	Air Filter No.	Air Filter Type	Air Filter Dimensions (In.)	Heating Type	Capacity Cooling (B.t.u.h.)	Capacity Heating (B.t.u.h.)	List Price
PKP31C*	1	230	F-22	3.6	1	1200	800	1	⅓	1	Permanent	18x22x1	NA	36,000	NA	1,478.32
PKP51C†	1	230	F-22	5.2	1	1800	875	1	½	1	Permanent	30x21x1	NA	61,000	NA	2,082.31
PKP83C	3	208/220	F-22	8.8	2	2800	950	1	¾	2	Permanent	20x25x1	NA	97,000	NA	3,526.80
PH116SC	3	208/220	F-22	18	2	4000	...	1	¾	3	Disposable	25x20x1	Steam	125,000	270,000	4,066.67
PH166SC	3	208/220	F-12	27	2	6000	...	1	1½	6	Permanent	16x20x2	Steam	191,000	404,000	5,813.33
PH216SC	3	208/220	F-22	36	2	8000	...	1	2	8	Permanent	16x20x2	Steam	248,000	556,000	7,173.00
P266SC	3	208/220	F-12	42	2	8000	...	1	3	8	Permanent	16x20x2	Steam	310,000	558,000	8,373.00
PH316SC	3	208/220	F-22	54	2	12000	...	1	6	8	Permanent	20x25x2	Steam	366,000	950,000	10,222.20
P416SC	3	208/220	F-12	69	2	12000	...	1	5	8	Permanent	20x25x2	Steam	492,000	950,000	12,800.00

*Also available in 3-phase, 208/220 volts at $1,483.63. †Also available in 3-phase, 208/220 volts at $2,091.20.

Thatcher—Thatcher Furnace Co., Garwood, N. J.

Model No.	Cabinet Height (In.)	Cabinet Width (In.)	Cabinet Depth (In.)	Condenser Type	Condenser Cooling Method	Evaporator Face Area (Sq. Ft.)	Evaporator Rows	Compressor Make	Hp.	Cooling Method	Type	Cylinders	Bore & Stroke (In.)	R.p.m.
WC 31	70¼	25	21½	Co-Axial	Water	2.91	4	Tecumseh	3	Gas	Hermetic	...	...	...
WC 33	70¼	25	21½	Co-Axial	Water	2.91	4	Tecumseh	3	Gas	Hermetic	...	...	...
WC 51	79¾	35	25	Co-Axial	Water	4.23	4	Tecumseh	5	Gas	Hermetic	...	...	...
WC 53	79¾	35	25	Co-Axial	Water	4.23	4	Tecumseh	5	Gas	Hermetic	...	...	...

Model No.	Compressor Phase	Motor Volts	Refrigerant Type	Charge (Lbs.)	Blowers No.	Blowers C.f.m.	Blowers R.p.m.	Blower Motor No.	Blower Motor Hp.	Air Filter No.	Air Filter Type	Air Filter Dimensions (In.)	Heating Type	Capacity Cooling (B.t.u.h.)	Capacity Heating (B.t.u.h.)	List Price
WC 31	1	230	F-22	6	1	1200	...	1	⅓	1	Disposable	20x25x1	...	36,000	...	$ 975.00
WC 33	3	220	F-22	6	1	1200	...	1	⅓	1	Disposable	20x25x1	...	36,000	...	965.00
WC 51	1	230	F-22	10	1	2000	...	1	½	2	Disposable	16x25x1	...	60,000	...	1,614.00
WC 53	3	220	F-22	10	1	2000	...	1	½	2	Disposable	16x25x1	...	60,000	...	1,527.00

Trane—The Trane Co., La Crosse, Wis.

Model No.	Cabinet Height (In.)	Cabinet Width (In.)	Cabinet Depth (In.)	Condenser Type	Condenser Cooling Method	Evaporator Face Area (Sq. Ft.)	Evaporator Rows	Compressor Make	Hp.	Cooling Method	Type	Cylinders	Bore & Stroke (In.)	R.p.m.
35SC	88	40	22	Co-Axial	Water	4.38	2	Copeland	3	Gas	Hermetic	2	1⅞x1⅜	1750
55SC	83	40	22	Co-Axial	Water	5.10	2	Trane & Tecumseh	5	Gas	Hermetic	2	2x2	1750
75SC	89	48	24	Co-Axial	Water	7.50	2	Trane	7½	Gas	Hermetic	3	2x2	1750
105SC	96	62	29	Co-Axial	Water	10.0	2	Trane	(2) 5	Gas	Hermetic	2	2x2	1750
155SC	104	70	29	Co-Axial	Water	15.0	2	Trane & Tecumseh	(2) 7½	Gas	Hermetic	3	2x2	1750
102SCE	...	109	36	Evaporative	Water	6.67	5	Trane	10	Air	Open	4	2½x2	1750
152SCE	...	117	37	Evaporative	Water	10.0	5	Trane	15	Air	Open	6	2½x2	1750
302SCE	...	121	40	Evaporative	Water	13.3	5	Trane	20	Air	Open	8	2½x2	1750
302SCW	...	71	40	Shell & Tube	Water	13.3	5	Trane	20	Air	Open	8	2½x3	1750

Model No.	Compressor Phase	Motor Volts	Refrigerant Type	Charge (Lbs.)	Blowers No.	Blowers C.f.m.	Blowers R.p.m.	Blower Motor No.	Blower Motor Hp.	Air Filter No.	Air Filter Type	Air Filter Dimensions (In.)	Heating Type	Capacity Cooling (B.t.u.h.)	Capacity Heating (B.t.u.h.)	List Price
35SC	...	...	R-22	4½	2	1200	...	1	¼	3	Disposable	12x30x1	Steam/Water Opt.	...	...	...
55SC	...	...	R-22	7½	2	2000	...	1	⅓	2	Disposable	20x20x1	Steam/Water Opt.	...	...	...
75SC	...	...	R-22	9½	2	3000	...	1	¾	3	Disposable	16x25x1	Steam/Water Opt.	...	...	...
105SC	...	...	R-22	15	2	4000	...	1	1½	6	Disposable	16x20x1	Steam/Water Opt.	...	...	...
155SC	...	...	R-22	19	2	6000	...	1	2	6	Disposable	20x25x1 20x20x1	Steam/Water Opt.	...	...	...
102SCE	...	...	R-12	45	3	4000	...	2	1½	3	Permanent	16x20x2	Steam/Water Opt.	...	...	...
152SCE	...	...	R-12	85	3	6000	...	2	2	3	Permanent	20x25x2	Steam/Water Opt.	...	...	...
302SCE	...	...	R-12	96	3	8000	...	2	3	6	Permanent	16x20x2	Steam/Water Opt.	...	...	...
302SCW	...	...	R-12	60	2	8000	...	1	3	6	Permanent	16x20x2	Steam/Water Opt.	...	...	...

Typhoon—Typhoon Air Conditioning Co., Div. of Hupp Corp., Brooklyn

Model No.	Cabinet Height (In.)	Cabinet Width (In.)	Cabinet Depth (In.)	Condenser Type	Condenser Cooling Method	Evaporator Face Area (Sq. Ft.)	Evaporator Rows	Compressor Make	Hp.	Cooling Method	Type	Cylinders	Bore & Stroke (In.)	R.p.m.
H46SC†	87½	37	24½	Tube In Tube	Water	2.81	4	Tecumseh	3	Refrig.	Hermetic	2	2x1.2	1750
H66SC†	87½	37	24½	Tube In Tube	Water	4.67	4	Copeland	5	Refrig.	Access. Hermetic	3	2⅛x1 13/16	1750
H86SC†	87½	37	24½	Tube In Tube	Water	4.67	6	Copeland	7½	Refrig.	Access. Hermetic	3	2⅝x2	1750
H96SC†	95⅝	52	27	Tube In Tube	Water	7.87	4	Copeland	7½	Refrig.	Access. Hermetic	3	2⅝x2	1750
H116SC†	95⅝	52	27	Tube In Tube	Water	7.87	5	Copeland	10	Refrig.	Access. Hermetic	3	2 3/16x2	1750
H166SC†	117	62	35	Tube In Tube	Water	13.0	5	Copeland	(2) 7½	Refrig.	Access. Hermetic	3 (ea.)	2⅝x2	1750
H216SC†	117	62	35	Tube In Tube	Water	13.0	6	Copeland	(2) 10	Refrig.	Access. Hermetic	3 (ea.)	2 3/16x2	1750
266SC†	119	62	35	Shell & Tube	Water	13.0	8	Schnacke	25	Air	Open	4	3 3/32x3¾	1400
H316SC†	92*	84	45	Tube In Tube	Water	21.0	6	Copeland	(3) 10	Refrig.	Access. Hermetic	3 (ea.)	2 3/16x2	1750
416SC†	92*	84	45	Shell & Tube	Water	21.0	8	Brunner	40	Air	Open	4	4¼x5	890

Model No.	Compressor Phase	Motor Volts	Refrigerant Type	Charge (Lbs.)	Blowers No.	Blowers C.f.m.	Blowers R.p.m.	Blower Motor No.	Blower Motor Hp.	Air Filter No.	Air Filter Type	Air Filter Dimensions (In.)	Heating Type	Capacity Cooling (B.t.u.h.)	Capacity Heating (B.t.u.h.)	List Price
H46SC†	1—3	230/208/220	F-22	6½	1	1200	Var.	1	¼	2	Disposable	16x25x1 20x25x1	Optional	37,000	...	...
H66SC†	1—3	230/208/220	F-12	8½	1	2000	Var.	1	⅓	2	Disposable	16x25x1 20x25x1	Optional	60,600	...	...
H86SC†	3	208/220	F-12	10½	1	2800	Var.	1	½	2	Disposable	16x25x1 20x25x1	Optional	97,500	...	...
H96SC†	3	208/220	F-12	14	2	3800	Var.	1	¾	2	Disposable	25x20x1	Optional	101,750	...	...
H116SC†	3	208/220	F-22	16	2	4000	Var.	1	¾	2	Disposable	25x20x1	Optional	125,000	...	...
H166SC†	3	208/220	F-12	21	2	6000	Var.	1	1½	6	‡Permanent	16x20x2	Optional	191,000	...	...
H216SC†	3	208/220	F-22	32	2	8000	Var.	1	2	8	‡Permanent	16x20x2	Optional	248,000	...	...
266SC†	3	208/220	F-12	42	2	8000	Var.	1	3	8	‡Permanent	16x20x2	Optional	310,000	...	...
H316SC†	3	208/220	F-22	48	2	12000	Var.	1	5	8	Permanent	20x25x2	Optional	366,000	...	...
416SC†	3	208/220	F-12	72	2	12000	Var.	1	5	8	Permanent	20x25x2	Optional	492,000	...	...

*Plenum not available. †Remote air-cooled condensers available up to H116SC, available in multiples on other models. ‡Disposable-type filters also available.

UsAirco—U. S. Air Conditioning Corp., Philadelphia

Model No.	Cabinet Height (In.)	Cabinet Width (In.)	Cabinet Depth (In.)	Condenser Type	Condenser Cooling Method	Evaporator Face Area (Sq. Ft.)	Evaporator Rows	Compressor Make	Hp.	Cooling Method	Type	Cylinders	Bore & Stroke (In.)	R.p.m.
7720G	77½	31½	22	Shell & Coil	Water	2.4	...	Tecumseh	3	Gas	Hermetic	...	...	...
7750G	84¼	38½	24⅜	Shell & Coil	Water	3.75	...	Tecumseh	5	Gas	Hermetic	...	...	...
7775G	89½	42½	26⅜	Shell & Coil	Water	6.0	...	Copeland	7½	Gas	Semi-Hermetic	...	...	...
77100G	93⅞	54½	26⅛	Shell & Coil	Water	8.0	...	Copeland	10	Gas	Semi-Hermetic	...	...	...
77150G	101½	76	31⅛	Shell & Coil	Water	11.8	...	Copeland	(2) 7½	Gas	Semi-Hermetic	...	...	...
77200G	...	...	...	Shell & Coil	Water	...	...	Copeland	(2) 10	Gas	Semi-Hermetic	...	...	...

Model No.	Compressor Phase	Motor Volts	Refrigerant Type	Charge (Lbs.)	Blowers No.	Blowers C.f.m.	Blowers R.p.m.	Blower Motor No.	Blower Motor Hp.	Air Filter No.	Air Filter Type	Air Filter Dimensions (In.)	Heating Type	Capacity Cooling (B.t.u.h.)	Capacity Heating (B.t.u.h.)	List Price
7720G	1—3	230/208	F-22	...	1	1200	...	1	⅓	1	Cleanable	...	Steam/Water*	36,000	...	...
7750G	1—3	230/208	F-22	...	1	2000	...	1	½	1	Cleanable	...	Steam/Water*	60,000	...	...
7775G	3	208/220	F-22	...	2	3000	...	2	¾	1	Cleanable	...	Steam/Water*	90,000	...	...
77100G	3	208/220	F-22	...	2	4000	...	2	1½	1	Cleanable	...	Steam/Water*	120,000	...	...
77150G	3	208/220	F-22	...	2	6000	...	2	2	1	Cleanable	...	Steam/Water*	180,000	...	...
77200G	3	208/220	F-22	...	2	8000	...	2	2	1	Cleanable	...	Steam/Water*	240,000	...	...

*Optional.

Vaultmaster—Walter Haertel Co., Minneapolis

Model No.	Cabinet Height (In.)	Cabinet Width (In.)	Cabinet Depth (In.)	Condenser Type	Condenser Cooling Method	Evaporator Face Area (Sq. Ft.)	Evaporator Rows	Compressor Make	Hp.	Cooling Method	Type	Cylinders	Bore & Stroke (In.)	R.p.m.
VU-50	61⅛	37⅝	25⅝	...	Water	1.18	2	Copeland	½	...	Access. Hermetic	2	1¼x⅞	1750
VU-75	61⅛	37⅝	25⅝	...	Water	1.18	4	Copeland	¾	...	Access. Hermetic	2	1⅜x15/16	1750
VU-1	61⅛	37⅝	25⅝	...	Water	1.18	4	Copeland	1	...	Access. Hermetic	2	1 9/16x15/16	1750
VU-2	74	46⅛	28⅝	...	Water	2.92	4	Copeland	2	...	Access. Hermetic	2	1 15/16x1⅝	1750
VU-3	74	46⅛	28⅝	...	Water	4.50	4	Copeland	3	...	Access. Hermetic	2	2⅛x1 7/16	1750
VU-5	79⅝	75⅛	29⅝	...	Water	7.50	4	Copeland	5	...	Open	3	3⅛x3	435

Model No.	Compressor Phase	Motor Volts	Refrigerant Type	Charge (Lbs.)	Blowers No.	Blowers C.f.m.	Blowers R.p.m.	Blower Motor No.	Blower Motor Hp.	Air Filter No.	Air Filter Type	Air Filter Dimensions (In.)	Heating Type	Capacity Cooling (B.t.u.h.)	Capacity Heating (B.t.u.h.)	List Price
VU-50	1	110	F-12	5	1	230	575	1	¼	2	Disposable	10x20x1	...	6,500	...	$1,495.00
VU-75	1	110	F-12	6	1	500	563	1	¼	2	Disposable	10x20x1	...	10,000	...	1,825.00
VU-1	1	220	F-12	6	1	700	880	1	¼	2	Disposable	10x20x1	...	13,000	...	2,095.00
VU-2	3	220	F-12	16	1	1300	750	1	¼	2	Disposable	10x20x1	...	23,000	...	3,145.00
VU-3	3	220	F-12	24	1	1800	900	1	½	2	Disposable	10x20x1	...	35,000	...	3,640.00
VU-5	3	220	F-12	40	2	3300	450	1	½	2	Disposable	16x25x2	...	57,500	...	4,650.00

Vornado—The O. A. Sutton Corp., Wichita, Kan.

Model No.	Cabinet Height (In.)	Cabinet Width (In.)	Cabinet Depth (In.)	Condenser Type	Condenser Cooling Method	Evaporator Face Area (Sq. Ft.)	Evaporator Rows	Compressor Make	Hp.	Cooling Method	Type	Cylinders	Bore & Stroke (In.)	R.p.m.
B 200BF-2	21	32⅞	38⅜	Fin	Air	1.9	3	Tecumseh	(2) 1	Air	Reciprocating	2	1 5/16x1 1/64	1725
B 200C-2	21	32⅞	38⅜	Fin	Air	1.9	3	Tecumseh	(2) 1	Air	Reciprocating	2	1 5/16x1 1/64	1725
B 350BF-2	24⅜	39½	48¼	Fin	Air	2.7	4	Tecumseh	(2) 1¾	Air	Reciprocating	2	1⅜x1 1/64	1725
B 350C-2	24⅜	39½	48¼	Fin	Air	2.7	4	Tecumseh	(2) 1¾	Air	Reciprocating	2	1⅜x1 1/64	1725

Model No.	Compressor Phase	Motor Volts	Refrigerant Type	Charge (Lbs.)	Blowers No.	Blowers C.f.m.	Blowers R.p.m.	Blower Motor No.	Blower Motor Hp.	Air Filter No.	Air Filter Type	Air Filter Dimensions (In.)	Heating Type	Capacity Cooling (B.t.u.h.)	Capacity Heating (B.t.u.h.)	List Price
B 200BF-2	1	230	F-22	3# 2 oz.	1	900	1125	1	¼	1	Disposable	1x12x24	...	22,000	...	...
B 200C-2	1	230	F-22	3# 2 oz.	1	900	1125	1	¼	1	Disposable	1x12x24	...	22,000	...	...
B 350BF-2	1	230	F-22	5# 6 oz.	1	1500	1125	1	¼	1	Disposable	1x14x28	...	36,000	...	...
B 350C-2	1	230	F-22	5# 6 oz.	1	1500	1135	1	¼	1	Disposable	1x11x28	...	36,000	...	...

Special Features: Vornado Free Air Adapter Kit (both supply and return air) available to make commercial installation without the expense of duct system.

Weathermakers—Carrier Corp., Syracuse, N. Y.

Model No.	Cabinet Height (In.)	Cabinet Width (In.)	Cabinet Depth (In.)	Condenser Type	Condenser Cooling Method	Evaporator Face Area (Sq. Ft.)	Evaporator Rows	Compressor Make	Hp.	Cooling Method	Type	Cylinders	Bore & Stroke (In.)	R.p.m.
50R2	77	36	23⅛	Shell-Coil	Water	3.3	...	Carrier	2	Refrig.	Access. Hermetic	2	2x1¼	1750
50R4	77	36	23⅛	Shell-Coil	Water	5.2	...	Carrier	3	Refrig.	Access. Hermetic	2	2x1¼	1750
50R6	88	43	24⅛	Shell-Coil	Water	7.1	...	Carrier	5	Refrig.	Access. Hermetic	4	2x1 7/16	1750
50K8	102	48	30⅛	Shell-Coil	Water	9.1	...	Carrier	7½	Refrig.	Access. Hermetic	4	2x1 7/16	1750
50K12	90⅝	82	22⅜	Shell-Coil	Water	12.4	...	Carrier	10	Refrig.	Access. Hermetic	6	2x1¼	1750
50K13	90⅝	82	22⅜	Shell-Coil	Water	12.4	...	Carrier	(2) 5	Refrig.	Access. Hermetic	4	1 13/16x1¼	1750
50K16	107⅝	82	30⅝	Shell-Coil	Water	18.7	...	Carrier	(2) 7½	Refrig.	Access. Hermetic	4	2x1 7/16	1750
50N9	80⅝	41	22⅞	Finned Coil	Air	4.62	...	Carrier	5	Refrig.	Access. Hermetic	4	2x1 7/16	1750
50N11	90⅝	41	22⅞	Finned Coil	Air	5.9	...	Carrier	7½	Refrig.	Access. Hermetic	4	2x1 7/16	1750
41D24	96	100⅝	28⅛	Shell-Coil	Water	13.9	...	Carrier	(2) 10	Refrig.	Access. Hermetic	6	2x1¼	1750

Model No.	Compressor Phase	Motor Volts	Refrigerant Type	Charge (Lbs.)	Blowers No.	Blowers C.f.m.	Blowers R.p.m.	Blower Motor No.	Blower Motor Hp.	Air Filter No.	Air Filter Type	Air Filter Dimensions (In.)	Heating Type	Capacity Cooling (B.t.u.h.)	Capacity Heating (B.t.u.h.)	List Price
50R2	1-2-3	208/220/440/550	C-7	5.5	1	1000	...	1	⅛	2	Disposable	16x20	Hot Water	...	...	...
50R4	1-2-3	208/220/440/550	F-22	6.5	1	1500	...	1	⅓	2	Disposable	16x20	Hot Water	...	...	...
50R6	1-2-3	208/220/440/550	C-7	9.25	1	2500	...	1	½	2	Disposable	16x25 20x25	Hot Water	...	...	...
50K8	2—3	208/220/440/550	F-22	14½	1	3750	...	1	1	4	Disposable	2—16x20 2—16x25	Hot Water	...	...	...
50K12	2—3	208/220/440/550	F-22	17	2	5000	...	1	2	4	Disposable	20x25	Hot Water	...	...	...
50K13	2—3	208/220/440/550	F-22	25	2	5000	...	1	2	4	Disposable	20x25	Hot Water	...	...	...
50K16	2—3	208/220/440/550	F-22	29	2	7500	...	1	3	8	Disposable	4—16x20 4—20x20	Hot Water	...	...	...
50N9	1-2-3	208/220/440/550	C-7	11.5	1	1800	...	1	¾	2	Disposable	20x20	Hot Water	...	...	...
50N11	2—3	208/220/440/550	C-7	14.0	1	2600	...	1	1	2	Disposable	20x25	Hot Water	...	...	...
41D24	2—3	208/220/440/550	F-22	38	2	8000	...	1	3	8	Permanent	16x20	Hot Water	...	...	...

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Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Condenser Type	Condenser Cooling Method	Evaporator Face Area (Sq. Ft.)	Evaporator Rows	Compressor Make	Compressor Hp.	Compressor Cooling Method	Compressor Type	Compressor Cylinders	Compressor Bore & Stroke (In.)	Compressor R.p.m.
Weathertrol—Therm-Air Mfg. Co., Peekskill, N. Y.														
COM 2	76	31	30	Tube In Tube	Water/Air	....	4	Tecumseh	2	Refrig.	Hermetic	2	....	1750
COM 3	76	31	30	Tube In Tube	Water/Air	....	4	Tecumseh	3	Refrig.	Hermetic	2	....	1750
COM 5	76	38½	28½	Tube In Tube	Water/Air	....	4	Tecumseh	5	Refrig.	Hermetic	4	....	1750
COM 7½	76	38½	28½	Tube In Tube	Water/Air	....	4	Worthington	7½	Refrig.	Semi-Hermetic	6	....	1750
COM 10	96	64	30	Tube In Tube	Water/Air	....	(3) 4	Tecumseh	(3) 5	Refrig.	Hermetic	(2) 4	....	1750
COM 15	96	64	30	Tube In Tube	Water/Air	....	(2) 4	Worthington	(2) 7½	Refrig.	Semi-Hermetic	(2) 6	....	1750
Special Features: Models for ductwork or remote installations also. Horizontal or suspended models to 7½ tons.														
Westinghouse—Westinghouse Electric Corp., Air Conditioning Div., Staunton, Va.														
SU-402	75⅝	34⅞	25	Tube In Tube	Water	2.92	2	Westinghouse	3	Refrig.	Access. Hermetic	2	2x1⅛	1750
SU-403	82⅝	41⅞	27	Shell & Coil	Water	3.95	3	Westinghouse	5	Refrig.	Access. Hermetic	2	2⅛x2¼	1750
SU-408	91	52½	28½	Shell & Coil	Water	5.95	3	Westinghouse	7½	Refrig.	Access. Hermetic	2	2⅛x2¼	1750
MU-102	91*	61*	32*	Shell & Tube	Water	8.9	4	Westinghouse	(2) 5	Refrig.	Access. Hermetic	2	2⅛x2¼	1750
MU-152	91*	76*	32*	Shell & Tube	Water	12.2	4	Westinghouse	(2) 7½	Refrig.	Access. Hermetic	3	2⅛x2⅛	1750
LU-201	73½	100¼	34⅝†	Shell & Tube	Water	13.5	4	Westinghouse	20	Refrig.	Access. Hermetic	4	3x3	1750
LU-251	73½	100¼	34⅝†	Shell & Tube	Water	15.0	4	Westinghouse	25	Refrig.	Access. Hermetic	4	3⅛x3	1750
*Top-mounted fan section. †Without filter section. ‡Optional. Special Features: Commercial units can be air cooled by using an air-cooled condenser with the basic unit.														
Winkler—Heating & Air Conditioning Div., Stewart-Warner Corp., Lebanon, Ind.														
SC-W-A-5	77⅛	38	18½	Co-Axial	Water	4.28	4	Tecumseh	5	Gas	Hermetic	4	1⅜x1 7/16	1725
Worthington—Worthington Corp., Harrison, N. J.														
SCT-40*	82⅞	37¼	21¼	Shell and Coil	Water	2.67	2	Worthington	3	Suction Gas	Hermetic	3	1 15/16x1 7/16	1750
SCT-60*	86	48¼	21¼	Shell and Coil	Water	3.74	2	Worthington	5	Suction Gas	Hermetic	3	1 15/16x1 7/16	1750
SCT-80*	88½	58	23¾	Shell and Coil	Water	4.76	2	Worthington	7½	Suction Gas	Hermetic	5	1 15/16x1 7/16	1750
SCT-1040	96⅝	82½	31¼	Shell and Coil	Water	7.5	2	Worthington	(2) 10	Suction Gas	Hermetic	3	1 15/16x1 7/16	1750
SCT-1250	96⅝	82½	31¼	Shell and Coil	Water	7.5	2	Worthington	(3) 15	Suction Gas	Hermetic	5	1 15/16x1 7/16	1750
RWR-300	58⅛	29¼	27⅛	Shell and Coil	Water	2.71	3	Worthington	2	Suction Gas	Hermetic	2	1 15/16x1 7/16	1750
RWR-400	58⅛	29¼	27⅛	Shell and Coil	Water	3.44	3	Worthington	3	Suction Gas	Hermetic	2	1 15/16x1 7/16	1750
RWR-600	64⅝	39½	28⅛	Shell and Coil	Water	4.09	4	Worthington	5	Suction Gas	Hermetic	3	1 15/16x1 7/16	1750
RWR-900	79¼	46	33¾	Shell and Coil	Water	6.25	4	Worthington	7½	Suction Gas	Hermetic	5	1 15/16x1 7/16	1750
*Also available in air-cooled models. Special Features: The RWR packaged units can be either vertical or horizontal arrangement, with a number of blower arrangements.														
Yorkaire—York Corp., Subsidiary of Borg-Warner Corp., York, Pa.														
354	82	35	23	Counterflow	Water	3.77	3	York	3	Gas	Hermetic	3	1⅜x1 9/32	1725
554	82½	42	23	Counterflow	Water	5.3	3	York	5	Gas	Hermetic	4	1⅜x1 9/32	1725
753	93½	46	27	Counterflow	Water	6.7	3	York	7½	Gas	Hermetic	6	1⅜x1 9/32	1725
1003	95⅝	71	26	Counterflow	Water	10.0	3	York	(2) 7½	Gas	Hermetic	6	1⅜x1 9/32	1725
1503	89¾	79⅝	29½	Counterflow	Water	13.0	4	York	(3) 7½	Gas	Hermetic	6	1⅜x1 9/32	1725
2501	103⅝	79⅝	42	Counterflow	Water	20.0	4	York	(2) 5	Gas	Hermetic	4	1⅜x1 9/32	1725
Special Features: Steam heat is optional accessory. All models available without blower and plenum for use as "add on" equipment for existing warm air systems. Models without blower and plenum have the same model number but are preceded by the letters HC. Models 1003, 1503, 2501 have multiple refrigerant circuits for step-start, step-capacity operation.														

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Model No.	Compressor Phase	Compressor Motor Volts	Refrigerant Type	Refrigerant Charge (Lbs.)	Blowers No.	Blowers C.f.m.	Blowers R.p.m.	Blower Motor No.	Blower Motor Hp.	Air Filter No.	Air Filter Type	Air Filter Dimensions (In.)	Heating Type	Capacities (B.t.u.h.) Cooling	Capacities (B.t.u.h.) Heating	List Price
Weathertrol—Therm-Air Mfg. Co., Peekskill, N. Y.																
	1—3	208/220/230	F-22	....	1	800	....	1	½	1	Disposable	20x25x1	Steam	24,800	....	....
	1—3	208/220/230	F-22	....	1	1200	....	1	½	1	Disposable	20x25x1	Steam	36,800	....	....
	1—3	208/220/230	F-22	....	1	2000	....	1	½	2	Disposable	16x25x1	Steam	60,800	....	....
	3	208/220	F-22	....	1	3000	....	1	¾	2	Disposable	15x30¾x1	Steam	94,400	....	....
	3	208/220	F-22	....	2	4000	....	2	1	6	Disposable	16x20x1	Steam	121,600	....	....
	3	208/220	F-22	....	2	6000	....	2	1½	6	Disposable	16x20x1	Steam	188,800	....	....
Westinghouse—Westinghouse Electric Corp., Air Conditioning Div., Staunton, Va.																
1-2-3	220/220/208/440/550	F-22	3	1	1200	1725	1	¼	1	Permanent	20x25x1	Steam/Water1	28,000	....	....	
1-2-3	220/220/208/440/550	F-12	11	1	2000	1725	1	¾	2	Permanent	16x20x1	Steam/Water1	60,000	....	....	
2—3	220/208/440/550	F-22	11	1	3000	1725	1	1	2	Permanent	20x20x1 20x25x1	Steam/Water1	90,000	....	....	
2—3	220/208/440/550	F-12	22	2	4000	770	1	2	4	Disposable	20x25x3	Steam/Water1	123,000	....	....	
3—3	208/220/440/550	F-22	22	3	6000	770	1	3	6	Disposable	2—15x20x2 4—20x25x2	Steam/Water1	190,000	....	....	
3—3	208/220/440/550	F-12	49	3	6300	735	1	3	8	Disposable	20x20x2	Steam/Water1	245,000	....	....	
2—3	208/220/440/550	F-12	49	3	7700	735	1	5	10	Disposable	16x25x2	Steam/Water1	298,000	....	....	
Winkler—Heating & Air Conditioning Div., Stewart-Warner Corp., Lebanon, Ind.																
1—3	208/220/230	F-22	....	2	1800	1050	2	¼	2	Disposable	....	....	....	58,000	....	....
Worthington—Worthington Corp., Harrison, N. J.																
1-2-3	208/220/440	F-12	9	1	1200	....	1	½	2	Perm./Disp.	16x20x1	Steam/Water	28,000	105,000	....	
1-2-3	208/220/440	F-22	12	1	2000	....	1	½	2	Perm./Disp.	20x20x1	Steam/Water	60,000	164,000	....	
2—3	208/220/440	F-22	14	2	3000	....	1	¾	3	Perm./Disp.	16x25x1	Steam/Water	90,000	235,000	....	
3—3	208/220/440	F-22	26	2	4000	....	1	1½	8	Perm./Disp.	16x20x1 20x20x1	Steam/Water	120,000	294,000	....	
3—3	208/220/440	F-22	28	2	6000	....	1	2	8	Perm./Disp.	16x20x1 20x20x1	Steam/Water	180,000	365,000	....	
1	220	F-12	6	1	800	....	1	½	1	Perm./Disp.	20x16x1 17⅞x15¼x⅞	Steam	8,000	80,100	....	
1—3	230/208/220	F-22	8	1	1200	....	1	½	1	Perm./Disp.	20x20x1 17⅞x15¼x⅞	Steam	36,000	118,580	....	
1—3	230/208/220	F-22	9	1	2000	....	1	½	1	Perm./Disp.	20x20x1 17⅞x15¼x⅞	Steam	60,000	156,960	....	
3	208/220	F-22	11.5	1	3000	....	1	¾	2	Perm./Disp.	22⅝x23⅛x⅞	Steam	90,000	212,880	....	
Yorkaire—York Corp., Subsidiary of Borg-Warner Corp., York, Pa.																
1-2-3	230/220/208/440	F-22	7	1	1200	860-625	1	½	4	Permanent	10⅞x13¼x1	Steam	19,600	....	....	
1-2-3	230/220/208/440	F-22	8¾	1	2000	860-625	1	½	4	Permanent	10⅞x18⅝x1	Steam	49,000	....	....	
2—3	220/208/440	F-22	10	1	3000	745-550	1	1	4	Permanent	15⅞x20⅝x1	Steam	102,000	....	....	
2—3	220/208/440	F-22	17	1	4000	816	1	1½	4	Permanent	25½x15⅞x1	Steam	132,000	....	....	
2—3	220/208/440	F-22	20	2	6000	935	1	2	4	Permanent	30¼x15⅞x1	Steam	192,000	....	....	
3	208/220/440	F-22	30	2	9000	780	1	3	6	Permanent	3—16x25x1 3—30x25x1	Steam	300,000	....	....	

Residential Heat Pumps

Heat Pumps

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacities (B.t.u.h.) Cooling	Capacities (B.t.u.h.) Heating	Heating Type	Compressor Motor Phase	Compressor Motor Volts	Compressor No.	Compressor Make	Compressor Hp.	Compressor Cooling Method	Compressor Type	Compressor Cylis.	Compressor Bore & Stroke (In.)	Compressor R.p.m.
ACI-H—American Coils Co., Farmingdale, N. J.																
ACI-H-30	66	35¼	25⅛	36,000	46,000	Rev. Cycle	1—3	230/208/220	1	Copeland	3	Gas	Semi-Hermetic	2	2⅛x1 7/16	1750
ACI-H-50	71	44⅜	26⅜	61,000	80,000	Rev. Cycle	1-2-3	230/208/220	1	Copeland	5	Gas	Semi-Hermetic	2	2½x1 13/16	1750
ACI-H-75	71	51	30¼	93,000	120,000	Rev. Cycle	3—3	208/220	1	Copeland	7½	Gas	Semi-Hermetic	3	2⅛x3	1750
ACI-H-100	75	57	30¼	121,000	160,000	Rev. Cycle	1-2-3	230/208/220	2	Copeland	5	Gas	Semi-Hermetic	2	2½x1 13/16	1750
ACI-H-150	77	50	31	182,000	230,000	Rev. Cycle	2—3	208/220	2	Copeland	7½	Gas	Semi-Hermetic	3	2⅝x2	1750
All units upflow. All models available in 440/550 volts.																
Cool Heat—Drying Systems, Inc., Chicago																
HP-3-1	64	47	56	36,100	60,000	Rev. Cycle	1—3	230/208/220	1	Bendix-West.	3	Air	Reciprocating	2	2¼x1¼	1750
HP-5-1	64	47	56	58,300	80,000	Rev. Cycle	1	230	1	Bendix-West.	5	Air	Reciprocating	2	2½x1½	1750
HP-5-3	64	47	56	62,000	80,000	Rev. Cycle	3	208/220	1	Bendix-West.	5	Air	Reciprocating	4	2½x1¼	1750
HP-10-3	66	64	78	124,000	160,000	Rev. Cycle	3	208/220	2	Bendix-West.	10	Air	Reciprocating	4	2½x1¼	1750
HP-15-3	66	64	78	186,000	120,000	Rev. Cycle	3	208/220	2	Bendix-West.	15	Air	Reciprocating	4	2½x1½	1750
Has electric resistance heaters as boosters.																
Genatron—General Air Conditioning Corp., Los Angeles																
RO-26	34	30	21	24,000	40,250	Rev. Cycle	1	208/220	1	Tecumseh	2	Gas	Hermetic	2	1⅜x1.2	1725
RO-31 HP	40	30	25	37,700	68,500	Rev. Cycle	1—3	208/220	1	Tecumseh	3	Gas	Hermetic	2	2x1.2	1725
RO-52EA	57	40	26	65,500	98,330	Rev. Cycle	1—3	208/220	1	Tecumseh	5	Gas	Hermetic	4	1⅜x1 7/16	1725
RO-10	72	66	30	131,000	196,600	Rev. Cycle	3	208/220	2	Tecumseh	10	Gas	Hermetic	4	1⅜x1 7/16	1725
Laurel—Laurel Products, Inc., Laurel, Miss.																
CCU-24	27	28	48	24,000	30,000	Rev. Cycle	1—3	230	1	Tecumseh	2	Gas	Hermetic	....	....	....
‡AHV-2H	48	26	30	....	....	....	....	230	....	....	....	....	....	....	....	....
CCU-3H	33	39	54	36,000	45,000	Rev. Cycle	1—3	230	1	Tecumseh	3	Gas	Hermetic	....	....	....
‡AHV-3H	48	35	30	....	....	....	....	230	....	....	....	....	....	....	....	....
CCU-5H	33	32	76	60,000	75,000	Rev. Cycle	1—3	230	1	Tecumseh	5	Gas	Hermetic	....	....	....
‡AHV-5H	49	39	24	....	....	....	....	230	....	....	....	....	....	....	....	....
‡Upflow only. Also available in horizontal flow.																
McMillan Comfortaire—McMillan Comfortaire Heat Pumps, Inc., Jacksonville, Fla.																
20-1	58⅝	26¾	22¼	24,300	34,200	....	....	230	1	Copeland	2	Refrig.	Semi-Hermetic	2	1 15/16x1⅛	1750
30-1	68¼	32⅜	22¼	37,200	47,400	....	....	230	1	Copeland	3	Refrig.	Semi-Hermetic	2	2⅛x1 7/16	1750
50-1	71⅛	43¼	24⅝	60,300	78,700	....	....	230	1	Copeland	5	Refrig.	Semi-Hermetic	3	2⅛x1 7/16	1750
75-1	74	56	27⅝	94,700	117,300	....	....	220	1	Copeland	7½	Refrig.	Semi-Hermetic	3	2⅝x2	1750
100-1 (sgl.)	85⅞	57½	29⅝	121,600	158,100	....	....	220	1	Copeland	10	Refrig.	Semi-Hermetic	3	2 3/16x2	1750
100-1 (dual)	85⅞	57⅜	29⅝	121,600	158,100	....	....	220	2	Copeland	10	Refrig.	Semi-Hermetic	(2)2	2½x1 7/16	1750
150-1	85	80	34	189,400	231,000	....	....	220	2	Copeland	15	Refrig.	Semi-Hermetic	(2)3	2⅝x2	1750
200-1	93¼	80	44	242,800	316,100	....	....	220	2	Copeland	20	Refrig.	Semi-Hermetic	(2)3	2 3/16x2	1750
Horizontal or upflow. Heating and cooling from the earth.																
Shipley Homeaire—York-Shipley, Inc., York, Pa.																
ACR7-30RD	22⅛	35	25½	24,000	29,000*	Rev. Cycle	1	230	1	Tecumseh	2	Air	Hermetic	2	1⅜x1.2	1725
ACR7-30RD	24⅛	42	30	33,000	29,500	Rev. Cycle	1	230	1	Tecumseh	3	Air	Hermetic	2	2x1.2	1725
ACR7-50RD	41⅛	49	41	60,000	53,000	Rev. Cycle	1—3	230	1	Tecumseh	5	Air	Hermetic	4	1⅜x1 7/16	1725
*Design temperature 50° F.																
Weathertron—General Electric Co., Bloomfield, N. J.																
WT44C	74	48	29½	39,000	75,500*	Rev. Cycle	1—3	230/220	1	General Elec.	....	Refrig.	Mod. Hermetic	3	2.06x1.68	1725
WT66C	74	48	29½	56,000	104,400*	Rev. Cycle	1—3	230/220	1	General Elec.	....	Refrig.	Mod. Hermetic	3	2.06x2.06	1725
WT96C	74	48	29½	96,000	66,750*	Rev. Cycle	1—3	230/220	1	General Elec.	....	Refrig.	Hermetic	2	2.06x2.06	1725
*Based on 70° F. indoor, 20° F. outdoor temperature.																
Westinghouse—Westinghouse Electric Corp., Air Conditioning Div., Staunton, Va.																
HP-32A	74⅝	28⅛	43½	36,000	36,480	Rev. Cycle	1—3	230/208/220	1	Westinghouse	3	Refrig.	Acc. Hermetic	2	2x1½	1750
HP-52A	74⅝	28⅛	70½	49,000	54,000	Rev. Cycle	....	230/208/220	1	Westinghouse	5	Refrig.	Acc. Hermetic	3	2⅛x2¼	1760

Heat Pumps

Model No.	Condenser Type	Condenser Cooling Medium	Evaporator Face Area (Sq. Ft.)	Evaporator Rows	Refrigerant Type	Refrigerant Charge (Lbs.)	Factory Charged?	Control Temp.	Control Damper	Air Filter No.	Air Filter Type	Air Filter Dimensions (In.)	Blowers In Evap. Unit?	Blowers Num.	Blowers C.f.m.	Blowers R.p.m.	Net Weight	Water Usage Gpm/ton
ACI-H—American Coils Co., Farmingdale, N. J.																		
	Fin and Tube	Water	2.7	4	F-12	11	Yes	Yes	No	1	Permanent	14⅜x25½x1	Yes	1	1200	680	764	1½
	Fin and Tube	Water	4.4	4	F-12	13	Yes	Yes	No	1	Permanent	18½x34⅝x1	Yes	1	2000	680	925	1½
	Fin and Tube	Water	6.7	4	F-12	16	Yes	Yes	No	1	Permanent	25½x38⅝x1	Yes	2	3000	720	1167	1½
	Fin and Tube	Water	9.0	4	F-12	26	Yes	Yes	No	1	Permanent	29¼x45 x1	Yes	2	4000	680	1351	1½
	Fin and Tube	Water	13.5	5	F-12	32	Yes	Yes	No	1	Permanent	29¼x59⅝x1	Yes	2	6000	760	3100	1½
Cool Heat—Drying Systems, Inc., Chicago																		
	....	Air	2.88	4	F-12	10	Yes	Yes	....	3	Disposable	....	Yes	....	1200	650	....	....
	....	Air	2.88	6	F-12	15	Yes	Yes	....	3	Disposable	....	Yes	....	2000	750	....	....
	....	Air	2.88	6	F-22	15	Yes	Yes	....	3	Disposable	....	Yes	....	2000	750	....	....
	....	Air	8.0	6	F-12	26	Yes	Yes	....	6	Disposable	....	Yes	....	4000	650	....	....
	....	Air	8.0	6	F-22	35	Yes	Yes	....	6	Disposable	....	Yes	....	6000	650	....	....
Genatron—General Air Conditioning Corp., Los Angeles																		
Fin Tube	Air	....	....	F-22	4.0	....	Yes	Yes	1	Permanent	9x30	Yes	2	1000	1060	325	....
Fin Tube	Air	....	....	F-22	6.2	....	Yes	Yes	1	Permanent	16x30	Yes	1	1000/1400	1080	435	....
Fin Tube	Air	....	....	F-22	12.0	....	Yes	Yes	2	Permanent	20x20	Yes	1	1800/2400	650	795	....
Fin Tube	Air	....	....	F-22	....	....	Yes	....	3	Permanent	30x20	Yes	1	3600/4800	....	1490	....
Laurel—Laurel Products, Inc., Laurel, Miss.																		
Fin and Tube	Air	....	....	....	....	....	....	....	....	1	2400	650	....	....	....	....	....	....
	....	....	2.1	3	F-22	....	....	Opt.	....	1	900	880	....	....	....	....	....	....
Fin and Tube	Air	....	....	....	....	....	....	....	....	1	3600	875	....	....	....	....	....	....
	....	....	3.1	3	F-22	....	....	Opt.	....	1	1350	750	....	....	....	....	....	....
Fin and Tube	Air	....	....	....	....	....	....	....	....	1	2250	650	....	....	....	....	....	....
	....	....	5.2	3	F-22	....	....	Opt.	....	....	....	....	....	....	....	....	....	....
McMillan Comfortaire—McMillan Comfortaire Heat Pumps, Inc., Jacksonville, Fla.																		
Shell & Tube	Water	1.9	6	F-12	9	Yes	Yes	No	1	Disposable	20x15x1		Yes	1	800	Adj.	910	2
Shell & Tube	Water	3.1	6	F-12	18	Yes	Yes	No	1	Disposable	25x20x1		Yes	1	1200	Adj.	940	2
Shell & Tube	Water	5.1	6	F-12	26	Yes	Yes	No	2	Disposable	1—20x16x1 1—20x20x1		Yes	1	2000	Adj.	1220	2
Shell & Tube	Water	7.3	6	F-12	39	Yes	Yes	No	3	Disposable	25x20x1		Yes	2	3000	Adj.	1800	2
Shell & Tube	Water	10.1	6	F-22	60	Yes	Yes	No	4	Disposable	3—25x16x1 3—20x16x1		Yes	2	3000	Adj.	2100	2
Shell & Tube	Water	10.1	6	F-12	54	Yes	Yes	No	4	Disposable	3—25x16x1 3—20x16x1		Yes	2	4000	Adj.	2240	2
Shell & Tube	Water	14.9	6	F-12	80	Yes	Yes	No	6	Disposable	4—20x20x1 3—25x20x1		Yes	2	6000	Adj.	3050	2
Shell & Tube	Water	20.6	6	F-22	120	Yes	Yes	No	6	Disposable	4—20x20x1 3—20x20x1		Yes	2	8000	Adj.	4400	2
Shipley Homeaire—York-Shipley, Inc., York, Pa.																		
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Weathertron—General Electric Co., Bloomfield, N. J.																		
Finned Coil	Air	3.3	4	F-22	10.5	Yes	Yes	No	1	Disposable	20x25x1		Yes	1	1200	890	....	....
Finned Coil	Air	5.3	4	F-22	13.8	Yes	Yes	No	2	Disposable	16x25x1		Yes	1	2000	873	....	....
Finned Coil	Air	5.3	4	F-22	12.7	Yes	Yes	No	2	Disposable	16x25x1		Yes	1	2000	873	....	....
Westinghouse—Westinghouse Electric Corp., Air Conditioning Div., Staunton, Va.																		
Finned Tube	Air	2.97	4	F-22	13½	Yes	Yes	No	1	Disposable	20x25x1		Yes	1	1200	760	1070	....
Finned Coil	Air	4.56	4	F-12	24	Yes	Yes	No	2	Disposable	1—16x25x1 1—20x25x1		Yes	1	2000	710	1500	....

Room Air Conditioners—Self Contained

Room Coolers

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Max. Proj.	Cabinet Material	Closing Adapter	Controls Concealed or Exposed	Controls Type	Capacities (B.t.u.h.) Cooling	Heating	Air Capacities (C.f.m.) Circ.	Fresh	Exhaust	Electrical Characteristics Volts	Amps.	Watts	Power Factor %
Admiral—Midwest Mfg. Corp., Galesburg, Ill.																	
75U7	20	26¼	16⅝	11	Steel, plastic	Opt.	Concealed	Knob	....	....	260	....	No	115	7.5	825	94
75M7	20	26¼	16⅝	11	Steel, plastic	Opt.	Concealed	Knob & P.B.	....	....	260	....	55	115	7.5	840	94
100U12	20	26¼	16⅝	11	Steel, plastic	Opt.	Concealed	Knob	....	....	300	....	No	115	12.0	1265	94
100M12	20	26¼	16⅝	11	Steel, plastic	Opt.	Concealed	Knob & P.B.	....	....	300	....	70	115	12.0	1280	94
100U22	20	26¼	16⅝	11	Steel, plastic	Opt.	Concealed	Knob	....	....	300	....	No	230	6.5	1250	90
100M22	20	26¼	16⅝	11	Steel, plastic	Opt.	Concealed	Knob & P.B.	....	....	320	....	75	230	7.5	1475	90
150M23	20	26¼	16⅝	11	Steel, plastic	Opt.	Concealed	Knob & P.B.	....	....	380	....	90	230	10.5	2250	90
200M23	20	26¼	20⅝	12	Steel, plastic	No	Concealed	Knob & P.B.	....	....	500	....	100	230	12.0	2350	94
Airtemp—Airtemp Div. of Chrysler Corp., Dayton																	
1675-13	15⅝	26½	31¼	17¼	Steel	No	Exposed	Knob	6,300	....	215	....	....	115	7.5	840	93
1600-9	15⅝	26½	31¼	17¼	Steel	No	Exposed	Knob	9,500	....	340	50	100	230	7.0	1300	85
1600-10	15⅝	26½	31¼	17¼	Steel	No	Exposed	Knob	9,100	....	370	....	....	230	7.0	1300	85
1600-11	15⅝	26½	31¼	17¼	Steel	No	Exposed	Knob	8,600	....	350	45	90	115	12.0	1300	97
1600-13	15⅝	26½	31¼	17¼	Steel	No	Exposed	Knob	8,400	....	350	45	90	115	12.0	1300	97
1600-14	15⅝	26½	31¼	17¼	Steel	No	Exposed	Knob	8,000	....	286	....	....	115	12.0	1355	93
1615-1	15⅝	26½	31¼	17¼	Steel	No	Exposed	Knob	12,900	....	340	65	100	230	10.0	2050	87
1630-1	15⅝	26½	31¼	17¼	Steel	No	Exposed	Knob	15,500	....	414	80	125	230	12.0	2520	94
1775-3	26¼	16⅝	12⅝	12⅝	Steel	Yes	Exposed	Knob	6,600	....	250	60	94	115	11.9	1140	88
1775-4	26¼	16⅝	12⅝	12⅝	Steel	Yes	Exposed	Knob	5,600	....	250	....	....	115	7.5	885	96
1850	23	27¼	18⅛	5	Steel	No	Exposed	Knob	5,300	....	200	30	90	115	7.5	790	90
1875	23	27¼	18⅛	5	Steel	No	Exposed	Knob	7,500	....	290	40	110	115/208/230	11.9*	1180	87.5*
1800	23	27¼	18⅛	5	Steel	No	Exposed	Knob	9,000	....	325	50	120	208/230	8.8/7.9	1340	90.7/88.5
Rated under ARI standard. *At 208 volts, 6.5 watts, 90.2% power factor; at 230 volts, 6 watts, 88.5% power factor.																	
Amana—Amana Refrigeration, Inc., Amana, Iowa																	
50LD2*	15	25	23	6¼	Steel, plastic	No	Exposed	Knob	....	....	225	....	....	115	7.5	750	85
75LD2	15	25	23	6¼	Steel, plastic	No	Exposed	Knob	....	....	270	....	....	115	7.5	850	89
100D2	15	25	23	6¼	Steel, plastic	No	Exposed	Knob	....	....	285	....	....	115	11.5	1225	92
100D8	15	25	23	6¼	Steel, plastic	No	Exposed	Knob	....	....	285	....	....	230	7.0	1300	86
75LF2	18	27	15½	1½	Steel, alum.	Yes	Concealed	Glider	....	....	275	80	80	115	7.5	850	90
100F3	18	27	15½	1½	Steel, alum.	Yes	Concealed	Glider	....	....	300	100	100	230	7.5	1600	90
75LA2	15	25	32⅝	4	Steel, plastic	Yes	Concealed	Glider	....	2,900	295	100	80	115	7.5	850	89
75A2	15	25	32⅝	4	Steel, plastic	Yes	Concealed	Glider	....	4,300	295	100	80	115	10.5	1100	88
100A2	15	25	32⅝	4	Steel, plastic	Yes	Concealed	Glider	....	3,600	375	120	100	115	12.0	1350	92
100A3	15	25	32⅝	4	Steel, plastic	Yes	Concealed	Glider	....	8,200	375	120	100	230	8.0	1600	90
150A3	15	25	31¼	4	Steel, plastic	Yes	Concealed	Glider	....	8,200	415	130	115	230	9.5	2050	89
200A3	15	25	31¼	4	Steel, plastic	Yes	Concealed	Glider	....	8,200	415	130	115	230	11.5	2400	90
*Activated charcoal and Fiberglas filter.																	
Capitolaire—National-U. S. Radiator Corp., Johnstown, Pa.																	
WIN-B-75	15	25	30⅝	Flush	Steel, plastic	No	Exposed	Pushbutton	7,375	....	290	60	120	115	12.0	....	88
WIN-B-100	15	25	33⅝	Flush	Steel, plastic	No	Exposed	Pushbutton	10,080	....	375	120	230	230	8.7	....	89
WIN-B-150	17	25	36	Flush	Steel, plastic	No	Exposed	Pushbutton	14,425	....	450	120	250	230	11.0	....	88
Rated under ASRE standard test.																	
Carrier—Carrier Corp., Syracuse, N. Y.																	
51A2-115	15	26⅝	31¼	2	Steel	No	Semi-Exp.	Knob	7,500	None	280	Yes	No	115	11.2	1190	85
51A2-230	15	26⅝	31¼	2	Steel	No	Semi-Exp.	Knob	7,500	None	280	Yes	No	230	5.9	1175	85
51A2-208	15	26⅝	31¼	2	Steel	No	Semi-Exp.	Knob	7,500	None	280	Yes	No	208	6.7	1190	85
51A4-230	15	26⅝	31¼	2	Steel	No	Semi-Exp.	Knob	9,600	None	310	Yes	No	230	7.5	1475	85
51A4-208	15	26⅝	31¼	2	Steel	No	Semi-Exp.	Knob	9,600	None	310	Yes	No	208	9.6	1530	85
51A5-230	15	26⅝	31¼	2	Steel	No	Semi-Exp.	Knob	14,500	None	415	Yes	No	230	11.5	2355	90
51A5-208	15	26⅝	31¼	2	Steel	No	Semi-Exp.	Knob	14,500	None	415	Yes	No	208	12.0	2400	90
51T2-115	15	26⅝	31¼	2	Steel	No	Semi-Exp.	Knob	7,500	None	280	Yes	No	115	11.2	1190	85
51T2-230	15	26⅝	31¼	2	Steel	No	Semi-Exp.	Knob	7,500	None	280	Yes	No	230	5.9	1175	85
51T2-208	15	26⅝	31¼	2	Steel	No	Semi-Exp.	Knob	7,500	None	280	Yes	No	208	6.7	1190	85
51T4-230	15	26⅝	31¼	2	Steel	No	Semi-Exp.	Knob	9,600	None	310	Yes	No	230	7.5	1475	85
51T4-208	15	26⅝	31¼	2	Steel	No	Semi-Exp.	Knob	9,600	None	310	Yes	No	208	9.6	1520	85
51T5-230	15	26⅝	31¼	2	Steel	No	Semi-Exp.	Knob	14,500	None	415	Yes	No	230	11.1	2355	90
51T5-208	15	26⅝	31¼	2	Steel	No	Semi-Exp.	Knob	14,500	None	415	Yes	No	208	12.0	2400	90
51T3-115S	15	26⅝	31¼	2	Steel	No	Semi-Exp.	Knob	7,500	None	300	Yes	No	115	7.5	960	95
51T4-115	15	26⅝	31¼	2	Steel	No	Semi-Exp.	Knob	9,600	None	325	Yes	No	115	12.0	1470	95
Rated under ARI standards. Special Features: All models equipped with reversible grille, two-stage thermostat, damper switch. 51T models have side deflection louvers. 51T3-115 and 115S have constant balanced refrigerant systems.																	
Coldspot—Mira-Cold Corp., Chicago																	
5777340	15⅛	26	22⅜	5	Steel	No	Exposed	Knob	6,500	None	300	....	....	115	11.70	1200	85
5776100	14⅛	26	22⅜	5	Steel	No	Exposed	Knob	7,800	None	250	....	....	230	6.25	1210	85
5775340	15⅛	26	22⅜	5	Steel	No	Exposed	Knob	5,650	None	250	....	....	115	7.5	860	95
5775100	15⅛	26	22⅜	6	Steel	No	Exposed	Knob	7,900	None	250	....	....	115	12.0	1280	95
5775101	15⅛	26	22⅜	5	Steel	Nc	Exposed	Knob	7,900	9,480	250	....	....	115	12.0	1260	85
5774150	15⅛	26	22⅜	6	Steel	No	Exposed	Knob	11,500	None	385	....	....	230	10.4	2000	85
5774200	16⅛	26	31⅞	6	Steel	No	Exposed	Knob	14,000	None	350	....	....	230	12.0	2300	85
5774201	16⅛	26	31⅞	6	Steel	No	Exposed	Knob	14,000	None	350	....	....	230	11.5	2900	85
5773340	16⅛	26	26	13	Steel	No	Exposed	Knob	5,850	None	290	50	250	115	7.5	870	95
5773100	16⅛	26	26	13	Steel	No	Exposed	Knob	8,600	None	320	50	250	115	12.0	1500	85
5773101	16⅛	26	26	13	Steel	No	Exposed	Knob	8,450	10,140	320	50	250	115	12.0	1320	90
5772100	16⅛	26	26	13	Steel	No	Exposed	Knob	9,400	None	320	50	250	230	7.3	1425	85
5772150	16⅛	26	34	11	Steel	No	Exposed	Knob	13,500	None	350	50	250	230	12.0	1800	85
5772200	16⅛	26	34	11	Steel	No	Exposed	Knob	15,500	None	360	75	300	230	12.0	2500	85
5770100	16⅛	26	25	13	Steel	No	Concealed	Pushbutton	10,500	None	300	50	250	230	7.3	1425	85
5770101	16⅛	26	25	13	Steel	No	Concealed	Pushbutton	10,200	12,240	300	50	250	230	7.3	1425	85
5770150	16⅛	26	34	11	Steel	No	Concealed	Pushbutton	15,500	None	330	75	270	230	12.0	2000	85
5770200	16⅛	26	34	11	Steel	No	Concealed	Pushbutton	16,600	None	370	75	300	230	12.0	2900	85
5775102	15⅛	26	22⅜	5	Steel	No	Exposed	Knob	7,900	None	250	....	....	115	12.0	1260	85
Rated under ARI standard. Special Features: Electronic disposable filters have indicator which indicates the amount of dirt in the filter. Units projecting 11 and 13 in. can also be mounted to project only 4 in.																	
Coolerator—Lonergan Coolerator Div., McGraw Edison Co., Albion, Mich.																	
74CS8	15⅝	26⅝	24	....	Steel	No	Exposed	Pushbutton	....	....	350	....	....	115	7.5	....	94
100CS8	15⅝	26⅝	24	....	Steel	No	Exposed	Pushbutton	....	....	450	....	....	115	12.0	....	91
102CSOT	15⅝	26⅝	24	....	Steel	No	Exposed	Pushbutton	....	....	630	....	....	230	8.0	....	86
74CD8	15⅝	26⅝	24	....	Steel	No	Exposed	Pushbutton	....	....	410	....	....	115	7.5	....	94
100CD8	15⅝	26⅝	24	....	Steel	No	Exposed	Pushbutton	....	....	550	....	....	115	12.0	....	90
101CDO	15⅝	26⅝	24	....	Steel	No	Exposed	Pushbutton	....	....	690	....	....	230	8.0	....	88
200CDO	17⅝	26⅝	30	....	Steel	No	Exposed	Pushbutton	....	....	1100	....	....	230	12.0	....	88
20CD8	17⅝	26⅝	30	....	Steel	No	Exposed	Pushbutton	....	....	1100	....	....	208	13.0	....	88
7WCD8	20⅝	25⅝	16⅞	....	Steel, plastic	No	Exposed	Pushbutton	....	....	410	....	....	115	7.5	....	91
1WCD8	20⅝	25⅝	16⅞	....	Steel, plastic	No	Exposed	Pushbutton	....	....	550	....	....	115	12.0	....	94
1WCDO	20⅝	25⅝	16⅞	....	Steel, plastic	No	Exposed	Pushbutton	....	....	690	....	....	115	8.0	....	85
1WCSOT	20⅝	25⅝	16⅞	....	Steel, plastic	No	Exposed	Pushbutton	....	....	....	....	....	115	12.0	....	88
1WCSQT	20⅝	25⅝	16⅞	....	Steel, plastic	No	Exposed	Pushbutton	....	....	....	....	....	230	....	....	88
15WCDO	20⅝	25⅝	16⅞	....	Steel, plastic	No	Exposed	Pushbutton	....	....	....	....	....	230	....	....	88
R-1WCDO	20⅝	25⅝	16⅞	....	Steel, plastic	No	Exposed	Pushbutton	....	....	....	....	....	115	12.0	....	85
Duo-Therm—Duo-Therm Div., Motor Wheel Corp., Lansing, Mich.																	
100A-8	14⅛	25	31	3⅛	Enameled steel	....	Exposed	Knobs	8,750*	....	250	....	200	115	13.1	....	....
100-8	14⅛	25	31	3⅛	Enameled steel	....	Exposed	Knobs	10,550*	....	300	....	300	230	8.6	....	....
150-8	14⅛	25	31	3⅛	Enameled steel	....	Exposed	Knobs	13,100*	....	350	....	350	230	9.7	....	....
*Rated under ASRE conditions. Special Features: Uses less than ¾ cu. ft. of living space due to roof location of unit, ceiling distribution.																	
Emerson-Electric Northwind—The Emerson Mfg. Co., St. Louis																	
10-15AT	15⅝	26½	31¼	6	Steel, plastic	No	Concealed	Knob	8,600	None	330	45	90	115	12.0	1400	97
10-30D	15⅝	26½	31¼	6	Steel, plastic	No	Exposed	Knob	9,100	None	370	....	....	230	7.0	1300	85
10-30T	15⅝	26½	31¼	6	Steel, plastic	No	Concealed	Knob	9,500	None	340	50	100	230	7.0	1300	85
15-30D	16⅝	26½	30¼	5	Steel, plastic	No	Exposed	Knob	12,500	None	310	....	....	230	9.5	1960	88
15-30T	15⅝	26½	31¼	6	Steel, plastic	No	Concealed	Knob	12,900	None	340	65	100	230	10.0	2060	87
20-30T	15⅝	26½	31¼	6	Steel, plastic	No	Concealed	Knob	15,500	None	414	80	125	230	12.0	2520	94
34-15AC	26¼	16⅝	12⅝	12⅝	Steel, plastic	Yes	Exposed	Knob	5,600	None	230	....	....	115	7.5	885	96
10-15AC	25⅝	15⅛	21⅞	12	Steel, plastic	No	Exposed	Knob	8,000	None	310	50	....	115	12.0	1380	90
34-15D	14¼	22½	24⅝	3½	Steel, plastic	No	Exposed	Knob	6,100	None	280	....	....	115	11.5	1160	90
34-15T	14¼	22½	24⅝	3½	Steel, plastic	No	Exposed	Knob	6,100	None	280	50	....	115	11.5	1160	90
34-15AD	14¼	22½	24⅝	3½	Steel, plastic	No	Exposed	Knob	5,500	None	240	....	....	115	7.5	885	90
34-15AT	14¼	22½	24⅝	3½	Steel, plastic	No	Exposed	Knob	5,500	None	240	50	....	115	7.5	885	90
10-15AD	14¼	22½	24⅝	3½	Steel, plastic	No	Exposed	Knob	7,800	None	300	....	....	115	12.0	1375	90
34-15AV	20⅝	26⅝	16⅝	2	Steel, plastic	No	Exposed	Knob	5,400	None	240	50	70	115	7.5	850	92
10-15AV	20⅝	26⅝	16⅝	2	Steel, plastic	No	Exposed	Knob	8,000	None	300	70	90	115	12.0	1250	90
15-30V	20⅝	26⅝	16⅝	2	Steel, plastic	No	Exposed	Knob	11,800	None	340	90	90	230	8.6	1850	92
Rated under ARI standard. All model numbers are prefixed by AC-7. *Evaporator and condenser.																	

Room Coolers

Model No.	Heating Type	Heating Watts	Compressor Make	Hp.	Cyl.	R.p.m.	Refrigerant Type	Charge (oz.)	Air Filter No.	Type	Dimensions	Fans Evaporator R.p.m.	Hp.	Condenser R.p.m.	Hp.	Coil (rows) Evap.	Cond.	Net Weight	List Price
Admiral—Midwest Mfg. Corp., Galesburg, Ill.																			
75U7	None	....	Tecumseh	¾	1	1700	F-22	16	1	Disposable	11⅛x17⅛x½	1085	....	1085	....	2	2	143	....
75M7	None	....	Tecumseh	¾	1	1700	F-22	16	1	Permanent	11⅛x17⅛x½	1085	....	1085	....	2	2	144	....
100U12	None	....	Tecumseh	1	1	1700	F-22	23	1	Disposable	11⅛x17⅛x½	1085	....	1085	....	3	3	154	....
100M12	None	....	Tecumseh	1	1	1700	F-22	23	1	Permanent	11⅛x17⅛x½	1085	....	1085	....	3	3	156	....
100U22	None	....	Tecumseh	1	1	1700	F-22	23.5	1	Permanent	11⅛x17⅛x½	1050	....	1050	....	3	3	162	....
100M22	None	....	Tecumseh	1	2	1700	F-22	23.5	1	Disposable	11⅛x17⅛x½	1080	....	1080	....	3	3	154	....
150M23	None	....	Tecumseh	1½	2	1700	F-22	28.0	1	Permanent	11⅛x17⅛x½	1550	....	1550	....	3	3	170	....
200M23	None	....	Tecumseh	2	2	1700	F-22	30	1	Permanent	11⅛x17⅛x½	1625	....	1625	....	4	4	193	....
Airtemp—Airtemp Div. of Chrysler Corp., Dayton																			
1675-13	....	....	Tecumseh	¾	1	1750	F-22	26.4	1	Disposable	11x23½x½	1050	1/20	Same Motor		1	3	170	....
1600-9	....	....	Tecumseh	1	2	1750	F-22	26.4	1	Disposable	11x23½x½	1050	1/10	Same Motor		1	4	185	....
1600-10	....	....	Tecumseh	1	2	1750	F-22	22.4	1	Disposable	11x23½x½	1050	1/10	Same Motor		1	3	180	....
1600-11	....	....	Tecumseh	1	1	1750	F-22	28.8	1	Disposable	11x23½x½	1050	1/10	Same Motor		1	4	180	....
1600-13	Rev. Cycle	1170	Tecumseh	1	1	1750	F-22	32.0	1	Disposable	11x23½x½	1050	1/10	Same Motor		1	4	180	....
1600-14	....	....	Tecumseh	1	1	1750	F-22	18.4	1	Disposable	11x23½x½	1500	1/12	Same Motor		1	3	170	....
1615-1	....	....	Tecumseh	1½	2	1750	F-22	26.4	1	Disposable	11x23½x½	1050	1/10	Same Motor		2	3	196	....
1630-1	....	....	Tecumseh	2	2	1750	F-22	31.2	1	Disposable	11x23½x½	1500	1/4	Same Motor		2	3	220	....
1775-3	....	....	Tecumseh	¾	1	1750	F-22	16.8	2	Disposable	11¼x8⅝x⅜	1550	1/80	1550	1/40	1	3	140	....
1775-4	....	....	Tecumseh	¾	1	1750	F-22	16.8	2	Disposable	11¼x8⅝x⅜	1550	1/80	1550	1/40	1	3	140	....
1850	....	....	Tecumseh	½	1	1750	F-12	19.2	1	Disposable	23⅝x12¾x½	1050	1/50	1050	1/50	1	2	165	....
1875	....	....	Tecumseh	¾	1	1750	F-22	18.4	1	Disposable	23⅝x12¾x½	1550	1/30	1050	1/30	2	3	180	....
1800	....	....	Tecumseh	1	2	1750	F-22	21.6	1	Disposable	23⅝x12¾x½	1550	1/30	1050	1/20	2	3	195	....
Amana—Amana Refrigeration, Inc., Amana, Iowa																			
50LD2*	....	....	Tecumseh	½	1	1750	F-12	16	1	Disposable	18¼x9⅜x½	1050	1/15	Same Motor		3	2	118	....
75LD2	....	....	Tecumseh	¾	1	1750	F-22	20	1	Disposable	18¼x9⅜x½	1050	1/15	Same Motor		3	2	124	....
100D2	....	....	Tecumseh	1	1	1750	F-22	24	1	Disposable	18¼x9⅜x½	1100	1/12	Same Motor		3	3	140	....
100D8	....	....	Tecumseh	1	1	1750	F-22	24	1	Disposable	18¼x9⅜x½	1100	1/12	Same Motor		3	3	140	....
75LF2	....	....	Tecumseh	¾	1	1750	F-22	25	1	Disposable*	18¼x9⅜x½	1050/850	1/15	Same Motor		3	4	148	....
100F3	....	....	Tecumseh	1	2	1750	F-22	27	1	Disposable*	18¼x9⅜x½	1100/900	1/12	Same Motor		4	4	158	....
75LA2	Electric	850	Tecumseh	¾	1	1750	F-22	25	1	Disposable*	18¼x9⅜x½	1050/850	1/15	Same Motor		2	4	178	....
75A2	Electric	1250	Tecumseh	¾	1	1750	F-22	25	1	Disposable*	18¼x9⅜x½	1050/850	1/15	Same Motor		2	4	185	....
100A2	Electric	1050	Tecumseh	1	1	1750	F-22	25	1	Disposable*	18¼x9⅜x½	1350/1250	1/8	Same Motor		3	4	188	....
100A3	Electric	2400	Tecumseh	1	2	1750	F-22	27	1	Disposable*	18¼x9⅜x½	1350/1250	1/8	Same Motor		3	4	196	....
150A3	Electric	2400	Tecumseh	1½	2	1750	F-22	31	1	Disposable*	18¼x9⅜x½	1480/1300	1/5	Same Motor		3	4	208	....
200A3	Electric	2400	Tecumseh	2	2	1750	F-22	31	1	Disposable*	18¼x9⅜x½	1480/1300	1/5	Same Motor		3	4	216	....
Capitolaire—National-U. S. Radiator Corp., Johnstown, Pa.																			
WIN-B-75	....	....	Tecumseh	¾	2	....	F-22	16	1	Cleanable	8x21x½	1050	..	Same Motor		2	3	196	....
WIN-B-100	....	....	Tecumseh	1	2	....	F-22	22	1	Cleanable	8x21x½	1050	..	Same Motor		....	....	215	....
WIN-B-150	....	....	Tecumseh	1½	2	....	F-22	24-28	1	Cleanable	....	1050	..	Same Motor		....	....	225	....
Carrier—Carrier Corp., Syracuse, N. Y.																			
51A2-115	....	....	Copeland	¾	2	1750	F-12	17¼	1	Permanent	7 7/16x21	1050	1/12	Same Motor		1	2	197	....
51A2-230	....	....	Copeland	¾	2	1750	F-12	17¼	1	Permanent	7 7/16x21	1050	1/12	Same Motor		1	2	197	....
51A2-208	....	....	Copeland	¾	2	1750	F-12	17¼	1	Permanent	7 7/16x21	1050	1/12	Same Motor		1	2	197	....
51A4-230	....	....	Copeland	1	2	1750	F-12	20½	1	Permanent	7 7/16x23	1050	1/10	Same Motor		1	3	198	....
51A4-208	....	....	Copeland	1	2	1750	F-12	20½	1	Permanent	7 7/16x23	1050	1/10	Same Motor		1	3	198	....
51A5-230	....	....	Copeland	1½	2	1750	C-7	21½	1	Permanent	7 7/16x23	1550	1/6	Same Motor		2	4	218	....
51A5-208	....	....	Copeland	1½	2	1750	C-7	21½	1	Permanent	7 7/16x23	1550	1/6	Same Motor		2	4	218	....
51T2-115	....	....	Copeland	¾	2	1750	F-12	17¼	1	Permanent	7 7/16x21	1050/950	1/12	Same Motor		1	2	199	....
51T2-230	....	....	Copeland	¾	2	1750	F-12	17¼	1	Permanent	7 7/16x21	1050/950	1/12	Same Motor		1	2	199	....
51T2-208	....	....	Copeland	¾	2	1750	F-12	17¼	1	Permanent	7 7/16x21	1050/950	1/12	Same Motor		1	2	199	....
51T4-230	....	....	Copeland	1	2	1750	F-12	20½	1	Permanent	7 7/16x23	1050/950	1/10	Same Motor		1	3	200	....
51T4-208	....	....	Copeland	1	2	1750	F-12	20½	1	Permanent	7 7/16x23	1050/950	1/10	Same Motor		1	3	200	....
51T5-230	....	....	Copeland	1½	2	1750	C-7	21½	1	Permanent	7 7/16x23	1550/1450	1/6	Same Motor		2	4	220	....
51T5-208	....	....	Copeland	1½	2	1750	C-7	21½	1	Permanent	7 7/16x23	1550/1450	1/6	Same Motor		2	4	220	....
51T3-115S	....	....	Copeland	¾	2	1750	C-7	23	1	Permanent	7 7/16x21	1140/1040	1/20	Same Motor		1	3	201	....
51T4-115	....	....	Copeland	1	2	1750	C-7	22	1	Permanent	7 7/16x23	1140/1040	1/12	Same Motor		1	4	202	....
Coldspot—Mira-Cold Corp., Chicago																			
5777340	....	....	Tecumseh	¾	....	1725	F-22	17.0	....	Disposable	8⅝x20¼x½	1050	1/12	Same Motor		1	2	161	....
5776100	....	....	Tecumseh	1	....	1725	F-22	22.0	....	Disposable	8⅝x20¼x½	1050	1/12	Same Motor		2	2	161	....
5775340	....	....	Tecumseh	¾	....	1725	F-22	16.0	....	Disposable	8⅝x20¼x½	1050	1/20	Same Motor		1	1	163	....
5775100	....	....	Tecumseh	1	....	1725	F-22	23.0	....	Disposable	8⅝x20¼x½	1050	1/12	Same Motor		2	2	169	....
5775101	Rev. Cycle	....	Tecumseh	1	....	1725	F-22	19.5	....	Disposable	8⅝x20¼x½	1050	1/12	Same Motor		2	2	171	....
5774150	....	....	Tecumseh	1½	....	1725	F-22	19.0	....	Disposable	8⅝x20¼x½	1550	1/4	Same Motor		2	2	180	....
5774200	....	....	Tecumseh	2	....	1725	F-22	25.0	....	Disposable	8⅝x20¼x½	1050	1/6	Same Motor		2	2	228½	....
5774201	....	....	Tecumseh	2	....	1725	F-22	21.0	....	Disposable	8⅝x20¼x½	1050	1/6	Same Motor		2	2	228½	....
5773340	....	....	Tecumseh	¾	....	1725	F-22	19.0	....	Disposable	8⅝x20¼x½	1050	1/20	Same Motor		1	2	170	....
5773100	....	....	Tecumseh	1	....	1725	F-22	29.0	....	Disposable	8⅝x20¼x½	1050	1/8	Same Motor		2	2	176	....
5773101	Rev. Cycle	....	Tecumseh	1	....	1725	F-22	29.0	....	Disposable	8⅝x20¼x½	1050	1/8	Same Motor		2	2	180	....
5772100	....	....	Tecumseh	1	....	1725	F-22	23.0	....	Disposable	8⅝x20¼x½	1050	1/8	Same Motor		2	2	179	....
5772150	....	....	Tecumseh	1½	....	1725	F-22	24.5	....	Disposable	8⅝x20¼x½	1050	1/6	Same Motor		2	3	219½	....
5772200	....	....	Tecumseh	2	....	1725	F-22	26.0	....	Disposable	8⅝x20¼x½	1050	1/6	Same Motor		2	3	229½	....
5770100	....	....	Tecumseh	1	....	1725	F-22	23.0	....	Electronic	8¾x1⅝x20	1050-950	1/8	Same Motor		2	3	179½	....
5770101	Rev. Cycle	....	Tecumseh	1	....	1725	F-22	23.0	....	Electronic	8¾x1⅝x20	1050-950	1/8	Same Motor		2	3	225	....
5770150	....	....	Tecumseh	1½	....	1725	F-22	26.5	....	Electronic	8¾x1⅝x20	1050-950	1/6	Same Motor		3	3	225	....
5770200	....	....	Tecumseh	2	....	1725	F-22	30.5	....	Electronic	8¾x1⅝x20	1050-950	1/4	Same Motor		4	3	232	....
5775102	....	....	Tecumseh	1	....	1725	F-22	23.0	....	Disposable	8⅝x20¼x½	1050	1/12	Same Motor		1	3	161	....
Coolerator—Lonergan Coolerator Div., McGraw Edison Co., Albion, Mich.																			
74CS8	....	....	Tecumseh	¾	1	....	F	22	1	Permanent	9⅝x19¼x½	1000	....	Same Motor		....	....	181	$319.95
100CS8	....	....	Tecumseh	1	1	....	F	22	1	Permanent	9⅝x19¼x½	1000	....	Same Motor		....	....	196	319.95
102CSOT	....	....	Tecumseh	1	1	....	F	22	1	Permanent	9⅝x19¼x½	1000	....	Same Motor		....	....	203	329.95
74CD8	....	....	Tecumseh	¾	1	....	F	22	2	Disposable	9⅝x19¼x½	1050/900	....	Same Motor		....	....	181	349.95
100CD8	....	....	Tecumseh	1	1	....	F	22	2	Disposable	9⅝x19¼x½	1050/900	....	Same Motor		....	....	196	349.95
101CDO	....	....	Tecumseh	1	1	....	F	22	2	Disposable	9⅝x19¼x½	1050/900	....	Same Motor		....	....	203	349.95
200CDO	....	....	Tecumseh	2	1	....	F	22	2	Disposable	11⅝x19¼x½	1050/900	....	Same Motor		....	....	250	499.95
20CD8	....	....	Tecumseh	2	1	....	F	22	2	Disposable	11⅝x19¼x½	1050/900	....	Same Motor		....	....	250	499.95
7WCD8	....	....	Tecumseh	¾	1	....	F	22	2	Permanent	8¼x18⅝x½	1050/900	....	Same Motor		....	....	175	349.95
1WCD8	....	....	Tecumseh	1	1	....	F	22	2	Permanent	8¼x18⅝x½	1050/900	....	Same Motor		....	....	190	349.95
1WCDO	....	....	Tecumseh	1	1	....	F	22	2	Permanent	8¼x18⅝x½	1050/900	....	Same Motor		....	....	198	349.95
1WCSOT	....	....	Tecumseh	1	1	....	F	22	1	Disposable	8¼x18⅝x½	1000	....	Same Motor		....	....	....	329.95
1WCSQT	....	....	Tecumseh	1	1	....	F	22	1	Disposable	8¼x16⅝x½	1000	....	Same Motor		....	....	....	329.95
15WCDO	....	....	Tecumseh	1½	1	....	F	22	2	Permanent	8¼x18⅝x½	1000	....	Same Motor		....	....	....	329.95
R-1WCDO	Rev. Cycle	....	Tecumseh	1	....	....	F	23	3	Permanent	8¼x18⅝x½	1050/900	....	Same Motor		....	....	....	399.95
Duo-Therm—Duo-Therm Div., Motor Wheel Corp., Lansing, Mich.																			
100A-8	....	....	Tecumseh	1	1	....	F-22	....	....	Permanent	17⅝x7½	....	1/8	....	1/8	2	2	185	....
100-8	....	....	Tecumseh	1	2	....	F-22	....	....	Permanent	17⅝x7½	....	1/8	....	1/8	3	3	190	....
150-8	....	....	Tecumseh	1½	2	....	F-22	....	....	Permanent	17⅝x7½	....	1/8	....	1/8	3	3	195	....
Emerson-Electric Northwind—The Emerson Mfg. Co., St. Louis																			
10-15AT	None	....	Tecumseh	1	1	1750	F-22	29	1	Disposable	11x23½x½	*	*	1050	1/10	1	4	180	$369.95
10-30D	None	....	Tecumseh	1	2	1750	F-22	22	1	Disposable	11x23½x½	*	*	1140	1/10	1	3	180	309.95
10-30T	None	....	Tecumseh	1	2	1750	F-22	1.65	1	Disposable	11x23½x½	*	*	1050	1/10	1	4	185	359.95
15-30D	None	....	Tecumseh	1½	2	1750	F-22	....	1	Disposable	11x15x½	*	*	1070	1/10	4	4	175	359.95
15-30T	None	....	Tecumseh	1½	2	1750	F-22	26	1	Disposable	11x23½x½	*	*	1050	1/10	2	3	195	419.95
20-30T	None	....	Tecumseh	2	2	1750	F-22	31	1	Disposable	11x23½x½	*	*	1550	1/4	2	3	220	449.95
34-15AC	None	....	Tecumseh	¾	1	1750	F-22	17	2	Disposable	11¼x8⅝x½	1550	1/80	1550	1/40	1	3	140	349.95
10-15AC	None	....	Tecumseh	1	1	1750	F-22	45	2	Disposable	12x7⅛x⅛	*	*	1480	1/10	2	3	150	369.95
34-15D	None	....	Tecumseh	¾	1	1750	F-22	45	1	Disposable	10x13⅛x⅛	*	*	1450	1/12	2	1	160	259.95
34-15T	None	....	Tecumseh	¾	1	1750	F-22	45	1	Disposable	10x13⅛x⅛	*	*	1450	1/12	2	1	160	299.95
34-15AD	None	....	Tecumseh	¾	1	1750	F-22	45	1	Disposable	10x13⅛x⅛	*	*	1080	1/20	2	1	160	289.95
34-15AT	None	....	Tecumseh	¾	1	1750	F-22	45	1	Disposable	10x13⅛x⅛	*	*	1450	1/20	2	1	160	319.95
10-15AD	None	....	Tecumseh	1	1	1750	F-22	45	1	Disposable	10x12⅛x⅛	*	*	1450	1/12	2	2	180	289.95
34-15AV	None	....	Tecumseh	¾	1	1750	F-22	45	1	Disposable	13x21x⅛	*	*	1050	1/15	2	2	162	349.95
10-15AV	None	....	Tecumseh	1	1	1750	F-22	55	1	Disposable	13x21x⅛	*	*	1050	1/15	2	2	172	369.95
15-30V	None	....	Tecumseh	1½	2	1750	F-22	55	1	Disposable	13x21x⅛	*	*	1050	1/8	3	4	182	429.95

Room Coolers

Room Coolers

Emerson-Quiet Kool—Emerson-Quiet Kool Corp., Newark, N. J.

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Max. Proj.	Cabinet Material	Closing Adapter	Controls Concealed or Exposed	Controls Type	Capacities (B.t.u.h.) Cooling	Heating	Air Capacities (C.f.m.) Circ.	Fresh	Exhaust	Electrical Characteristics Volts	Amps.	Watts	Power Factor %
7P1	17	30	15¾	15¾	Steel	No	Concealed	Pushbutton	....	....	260	70	100	115	12.0	1250	90
7P7	17	30	15¾	15¾	Steel	No	Concealed	Pushbutton	....	....	260	70	100	115	7.5	830	95
7P2	17	30	15¾	15¾	Steel	No	Concealed	Pushbutton	....	....	260	70	100	230	7.5	1250	90
7P8	17	30	15¾	15¾	Steel	No	Concealed	Pushbutton	....	....	260	70	100	208	7.5	1250	90
9P1	17	30	15¾	15¾	Steel	No	Concealed	Pushbutton	....	....	330	85	120	115	12.0	1300	95
9P2	17	30	15¾	15¾	Steel	No	Concealed	Pushbutton	....	....	330	85	120	230	10.0	1600	90
9P8	17	30	15¾	15¾	Steel	No	Concealed	Pushbutton	....	....	330	85	120	208	10.0	1600	90
E10G2	16	26¼	32¼	13⅝	Steel	No	Concealed	Knob	....	....	340	85	110	230	10.0	1540	90
E10G8	16	26¼	32¼	13⅝	Steel	No	Concealed	Knob	....	....	340	85	110	208	10.0	1540	90
E15G2	16	26¼	32¼	13⅝	Steel	No	Concealed	Knob	....	....	410	100	120	230	12.0	1965	90
E20G2	16	26¼	32¼	13⅝	Steel	No	Concealed	Knob	....	....	450	120	140	230	12.0	2460	90
7K1	16	26¼	22	22	Steel	No	Exposed	Knob	....	....	245	....	....	115	12.0	1250	90
7K7	16	26¼	22	22	Steel	No	Exposed	Knob	....	....	225	....	....	115	7.5	830	95
7K2	16	26¼	22	22	Steel	No	Exposed	Knob	....	....	245	....	....	230	7.5	1250	90
7K8	16	26¼	22	22	Steel	No	Exposed	Knob	....	....	245	....	....	208	7.5	1250	90
9K1	16	26¼	22	22	Steel	No	Exposed	Knob	....	....	270	....	....	115	12.0	1300	95
9N2	16	26¼	22	22	Steel	No	Exposed	Knob	....	....	270	....	....	230	10.0	1600	90
9K2	16	26¼	22	22	Steel	No	Exposed	Knob	....	....	270	....	....	230	10.0	1600	90
9K8	16	26¼	22	22	Steel	No	Exposed	Knob	....	....	270	....	....	208	10.0	1600	90
E7G1	16	26¼	23½	23½	Steel	No	Concealed	Knob	....	....	245	60	100	115	12.0	1250	90
E7G7	16	26¼	23½	23½	Steel	No	Concealed	Knob	....	....	225	60	100	115	7.5	830	90
E7G2	16	26¼	23½	23½	Steel	No	Concealed	Knob	....	....	245	60	100	230	10.0	1250	....

Model No.	Heating Type	Heating Watts	Compressor Make	Hp.	Cyl.	R.p.m.	Refrigerant Type	Charge (oz.)	Air Filter No.	Air Filter Type	Dimensions	Fans Evaporator R.p.m.	Evaporator Hp.	Condenser R.p.m.	Condenser Hp.	Coil (rows) Evap.	Coil (rows) Cond.	Net Weight	List Price
7P1	....	....	Tecumseh	¾	1	1750	F-22	*	1	Permanent	20x8½x½	1050	1/12	Same Motor		2	1	135	$358.00
7P7	....	....	Tecumseh	¾	1	1750	F-22	*	1	Permanent	20x8½x½	1050	1/12	Same Motor		2	2	135	368.00
7P2	....	....	Tecumseh	¾	1	1750	F-22	*	1	Permanent	20x8½x½	1050	1/12	Same Motor		2	2	135	368.00
7P8	....	....	Tecumseh	¾	1	1750	F-22	*	1	Permanent	20x8½x½	1050	1/12	Same Motor		2	2	135	368.00
9P1	....	....	Tecumseh	1	1	1750	F-22	*	1	Permanent	20x8½x½	1550	1/20	1550	1/15	3	2	140	398.00
9P2	....	....	Tecumseh	1	2	1750	F-22	*	1	Permanent	20x8½x½	1550	1/20	1550	1/15	4	2	140	388.00
9P8	....	....	Tecumseh	1	2	1750	F-22	*	1	Permanent	20x8½x½	1550	1/20	1550	1/15	4	2	140	388.00
E10G2	....	....	Tecumseh	1	2	1750	F-22	*	1	Permanent	21¾x9⅞x½	....	1/12	Same Motor		2	2	190	398.00
E10G8	....	....	Tecumseh	1	2	1750	F-22	*	1	Permanent	21¾x9⅞x½	....	1/12	Same Motor		2	2	190	398.00
E15G2	....	....	Tecumseh	1½	2	1750	F-22	*	1	Permanent	21¾x9⅞x½	....	1/6	Same Motor		3	3	210	488.00
E20G2	....	....	Tecumseh	2	2	1750	F-22	*	1	Permanent	21¾x9⅞x½	....	1/5	Same Motor		3	4	220	548.00
7K1	....	....	Tecumseh	¾	1	1750	F-22	*	1	Disposable	25¾x9½x½	1050	1/12	Same Motor		3	2	140	278.00
7K7	....	....	Tecumseh	¾	1	1750	F-22	*	1	Disposable	25¾x9½x½	1050	1/12	Same Motor		2	2	135	328.00
7K2	....	....	Tecumseh	¾	1	1750	F-22	*	1	Disposable	25¾x9½x½	1050	1/12	Same Motor		3	2	140	278.00
7K8	....	....	Tecumseh	¾	1	1750	F-22	*	1	Disposable	25¾x9½x½	1050	1/12	Same Motor		3	2	140	278.00
9K1	....	....	Tecumseh	1	1	1750	F-22	*	1	Disposable	25¾x9½x½	1050	1/8	Same Motor		4	2	145	358.00
9N2	....	....	Tecumseh	1	2	1750	F-22	*	1	Disposable	25¾x9½x½	1050	1/8	Same Motor		4	2	145	298.00
9K2	....	....	Tecumseh	1	2	1750	F-22	*	1	Disposable	25¾x9½x½	1050	1/8	Same Motor		4	2	145	318.00
9K8	....	....	Tecumseh	1	2	1750	F-22	*	1	Disposable	25¾x9½x½	1050	1/8	Same Motor		4	2	145	318.00
E7G1	Electric	....	Tecumseh	¾	1	1750	F-22	*	1	Permanent	25¾x9½x½	1050	1/12	Same Motor		3	2	150	328.00
E7G7	....	....	Tecumseh	¾	1	1750	F-22	*	1	Permanent	25¾x9½x½	1050	1/12	Same Motor		2	2	145	328.00
E7G2	Electric	....	Tecumseh	¾	1	1750	F-22	*	1	Permanent	25¾x9½x½	1050	1/12	Same Motor		3	2	150	328.00

*Refrigerant charge less than 2½ lbs. Special Features: All "P" and E10, E15, E20 models have electronic germ killer.

Fedders—Fedders-Quigan Corp., Maspeth, L. I., N. Y.

Model No.	Height	Width	Depth	Max. Proj.	Cabinet Material	Closing Adapter	Concealed or Exposed	Controls Type	Cooling	Heating	Circ.	Fresh	Exhaust	Volts	Amps.	Watts	Power Factor %
76CW	12⅞	15½	29⅝	15½	Steel, plastic	....	....	....	....	....	190	80	80	115	9.6	900	83
79CW	12⅞	15½	29⅝	15½	Steel, plastic	....	....	....	....	....	250	90	90	115	12.0	1200	88
79AW	16¼	27	17¼	2⅛	Steel, plastic	....	....	....	....	....	....	....	....	115	7.5	850	95
79CS	16¼	27	20¼	2¼	Steel, plastic	....	....	....	....	....	300	80	80	115	7.5	880	96
79D	16¼	27	17¼	2¼	Steel, plastic	....	....	....	....	....	300	80	70	115	12.0	1100	86
79DS	16¼	27	17¼	2¼	Steel, plastic	....	....	....	....	....	275	80	80	115	7.5	850	95
711AW	16¼	27	17¼	2⅛	Steel, plastic	....	....	....	....	....	....	....	....	115/230/208	12.0	1300	97
711C, D	16¼	27	17¼	2¼	Steel, plastic	....	....	....	....	....	340	140	165	208/230	8.6/8.0	1500/1600	87/85
711CH	16¼	27	17¼	3¼	Steel, plastic	....	....	....	....	....	340	140	165	230	8.0	1500	85
711DS	15⅞	27⅛	24⅝	5	Steel, plastic	....	....	....	....	....	340	95	165	115	11.0	1200	97
711CS	16¼	27	20¼	3¼	Steel, plastic	....	....	....	....	....	340	140	165	115	11.4	1100	96
711CSE	16¼	27	20¼	2¼	Steel, plastic	....	....	....	....	....	340	140	165	115	11.4	1100	96
711CSH	16¼	27	20¼	3¼	Steel, plastic	....	....	....	....	....	340	140	165	115	11.4	1300	96
716BW	16¼	27	20¼	2⅛	Steel, plastic	....	....	....	....	....	....	....	....	208/230	....	....	....
716C, D	16¼	27	20¼	2¼	Steel, plastic	....	....	....	....	....	385	150	180	230	9.9/11.4	2000	88/87
720C-3, 5	17⅞	27⅛	28⅝	5	Steel, plastic	....	....	....	....	....	440	140	185	208/230	12.0/11.1	2300	93/87
720T	17⅞	27⅛	28⅝	3	Steel	....	....	....	....	....	440	....	....	208/230	12.1/11.0	2300	93/87

Model No.	Heating Type	Heating Watts	Compressor Make	Hp.	Cyl.	R.p.m.	Refrigerant Type	Charge (oz.)	Air Filter No.	Air Filter Type	Dimensions	Evaporator R.p.m.	Evaporator Hp.	Condenser R.p.m.	Condenser Hp.	Coil (rows) Evap.	Coil (rows) Cond.	Net Weight	List Price
76CW	....	....	Tecumseh	½	1	....	F-22	....	2	Disposable	11x7¼x½	1550	1/15	1550	1/30	2	2	165	....
79CW	....	....	Tecumseh	¾	1	....	F-22	....	2	Disposable	11x7¼x½	1550	1/15	1550	1/30	2	3	185	....
79AW	....	....	Tecumseh	¾	1	....	F-22	....	1	Disposable	11⅛x14x½	1120	1/6	Same Motor		2	2	....	....
79CS	....	....	Tecumseh	¾	1	....	F-22	....	1	Disposable	11⅛x14x½	1075	1/15	Same Motor		2	3	171	....
79D	....	....	Tecumseh	¾	1	....	F-22	....	1	Disposable	11⅛x14x½	1080	1/18	Same Motor		2	2	152	....
79DS	....	....	Tecumseh	¾	1	....	F-22	....	1	Disposable	11⅛x14x½	1075	1/15	Same Motor		2	2	152	....
711AW	....	....	Tecumseh	1	1	....	F-22	....	1	Disposable	11⅛x14x½	1070	1/15*	Same Motor		2	2	....	....
711C, D	....	....	Tecumseh	1	2	....	F-22	....	1	Disposable	11⅛x14x½	1110	1/8	Same Motor		2	2	165	....
711CH	Rev. Cycle	....	Tecumseh	1	2	....	F-22	....	1	Disposable	11⅛x14x½	1110	1/8	Same Motor		2	2	165	....
711DS	....	....	Tecumseh	1	1	....	F-22	....	1	Disposable	13⅛x13⅛x½	1065	1/30	Same Motor		2	3	180	....
711CS	....	....	Tecumseh	1	1	....	F-22	....	1	Disposable	11⅛x14x½	1080	1/12	Same Motor		2	3	179	....
711CSE	....	....	Tecumseh	1	1	....	F-22	....	1	Electronic	10½x12⅞x1⅞	1080	1/15	Same Motor		2	3	189	....
711CSH	Rev. Cycle	....	Tecumseh	1	1	....	F-22	....	1	Disposable	11⅛x14x½	1080	1/12	Same Motor		2	3	179	....
716BW	....	....	....	1½	2	....	F-22	....	1	Disposable	11⅛x14x½	1120	1/6	Same Motor		3	3	....	....
716C, D	....	....	Tecumseh	1½	2	....	F-22	....	1	Disposable	11⅛x14x½	1120	1/6	Same Motor		3	3	178	....
720C-3, 5	....	....	Tecumseh	2	2	....	F-22	....	1	Disposable	13⅛x13⅛x½	1140	1/12-1/8	Same Motor		4	4	220	....
720T	....	....	Tecumseh	2	2	....	F-22	....	1	Disposable	13⅛x13⅛x½	1140	1/12	Same Motor		4	4	225	....

*¼ hp. at 1080 r.p.m. on 208/230.

FloatingAir and Superline—Friedrich Refrigerators, Inc., San Antonio, Texas

Model No.	Height	Width	Depth	Max. Proj.	Cabinet Material	Closing Adapter	Concealed or Exposed	Controls Type	Cooling	Heating	Circ.	Fresh	Exhaust	Volts	Amps.	Watts	Power Factor %
7W751S	17⅞	27¼	33⅝	4¼	Steel, plastic	No	Exposed	Knob	9,150	....	355	255	No	115	10.4	1112	....
7W1002S	17⅞	27¼	33⅝	4¼	Steel, plastic	No	Exposed	Knob	12,050	....	355	255	No	230	6.6	1420	....
7W1502S	19⅞	27¼	37⅝	4¼	Steel, plastic	No	Exposed	Knob	18,040	....	515	275	No	230	9.0	1973	....
7W2002S	19⅞	27¼	37⅝	4¼	Steel, plastic	No	Exposed	Knob	20,000	....	515	275	No	230	11.7	2500	....
7W751D	16⅝	25¾	32¼	12⅜	Steel, plastic	No	Exposed	Knob	6,750	....	335	No	No	115	7.5	799	....
7W1002D	16⅝	25¾	32¼	12⅜	Steel, plastic	No	Exposed	Knob	9,750	....	380	No	No	230	6.3	1230	....

Model No.	Heating Type	Heating Watts	Compressor Make	Hp.	Cyl.	R.p.m.	Refrigerant Type	Charge (oz.)	Air Filter No.	Air Filter Type	Dimensions	Evaporator R.p.m.	Evaporator Hp.	Condenser R.p.m.	Condenser Hp.	Coil (rows) Evap.	Coil (rows) Cond.	Net Weight	List Price
7W751S	No	No	Tecumseh	¾	2	1725	F-12	50	1	Disposable	9⅛x20½x½	910/1130	1/20	910/1130	1/20	3	3	210	....
7W1002S	No	No	Tecumseh	1	2	1725	F-22	40	1	Disposable	9⅛x20½x½	910/1130	1/12	910/1130	1/12	3	3	210	....
7W1502S	No	No	Tecumseh	1½	2	1725	F-22	85.5	1	Disposable	12¼x20½x½	910/1130	1/6	910/1130	1/6	4	4	270	....
7W2002S	No	No	Tecumseh	2	2	1725	F-22	....	1	Disposable	12¼x20½x½	910/1130	1/6	910/1130	1/6	4	4	270	....
7W751D	No	No	Tecumseh	¾	1	1725	F-22	26	1	Disposable	9⅛x20½x½	910/1130	1/20	910/1130	1/20	1	2	185	....
7W1002D	No	No	Tecumseh	¾	2	1725	F-22	32	1	Disposable	9⅛x20½x½	910/1130	1/8	910/1130	1/8	2	2	195	....

Rated under ARI standard.

Fresh'nd-Aire—Fresh'nd-Aire Co., Div. of Cory Corp., Chicago

Model No.	Height	Width	Depth	Max. Proj.	Cabinet Material	Closing Adapter	Concealed or Exposed	Controls Type	Cooling	Heating	Circ.	Fresh	Exhaust	Volts	Amps.	Watts	Power Factor %
L734	14¼	22¼	24⅛	3½	Steel	No	Exposed	Pushbutton	....	....	280	....	....	115	11.5	1150	91
L710	14¼	22¼	24⅛	3½	Steel	No	Exposed	Pushbutton	....	....	300	....	....	230	6.8	1925	90
L715	14⅝	25⅝	25½	6½	Steel	No	Exposed	Pushbutton	....	....	350	....	....	230	8.5	1875	92
L720	14⅝	25⅝	24⅛	6½	Steel	No	Exposed	Pushbutton	....	....	350	....	....	230	12.0	2350	92
C734	14¼	22¼	24⅛	3½	Steel	No	Exposed	Pushbutton	....	....	208	80	....	115	11.5	1150	91
C7534	14¼	22¼	24⅛	3½	Steel	No	Exposed	Pushbutton	....	....	260	80	....	115	7.5	790	92
C7110	14¼	22¼	24⅛	3½	Steel	No	Exposed	Pushbutton	....	....	300	100	....	115	12.0	1350	90
C710	14¼	22¼	24⅛	3½	Steel	No	Exposed	Pushbutton	....	....	300	100	....	230	6.8	1425	90
C715	14⅝	25⅝	26	6½	Steel	No	Concealed	Knob	....	....	320	100	100	230	9.5	2000	92
C720	14⅝	25⅝	26	6½	Steel	No	Concealed	Knob	....	....	350	125	100	230	12.5	2500	92
A734	21	26⅝	16¼	2	Steel	No	Exposed	Knob	....	....	280	80	70	115	11.8	1150	90
A7534	21	26⅝	16¼	2	Steel	No	Exposed	Knob	....	....	265	80	70	115	7.5	850	92
A7110	21	26⅝	16¼	2	Steel	No	Exposed	Knob	....	....	300	100	90	115	12.0	1350	90
A710	21	26⅝	16¼	2	Steel	No	Exposed	Knob	....	....	300	100	90	230	8.0	1500	90
A715	21	26⅝	16¼	2	Steel	No	Exposed	Knob	....	....	340	120	110	230	9.5	1900	92
M257	14⅝	25⅛	26	6½	Steel	No	Concealed	Knob	....	....	285	80	90	115	11.8	1180	90
M2575	14⅝	25⅛	26	6½	Steel	No	Concealed	Knob	....	....	260	80	80	115	7.5	830	92
M2157	14⅝	25⅛	26	6½	Steel	No	Concealed	Knob	....	....	300	90	90	115	12.0	1350	90
M2007	14⅝	25⅛	26	6½	Steel	No	Concealed	Knob	....	....	300	100	90	230	8.5	1500	90

Model No.	Heating Type	Heating Watts	Compressor Make	Hp.	Cyl.	R.p.m.	Refrigerant Type	Charge (oz.)	Air Filter No.	Air Filter Type	Dimensions	Evaporator R.p.m.	Evaporator Hp.	Condenser R.p.m.	Condenser Hp.	Coil (rows) Evap.	Coil (rows) Cond.	Net Weight	List Price
L734	....	....	Tecumseh	¾	1	1725	F-22	14.0	1	Disposable	14x10x½	1500	1/10	Same Motor		2	1	160	....
L710	....	....	Tecumseh	1	2	1725	F-22	19.5	1	Disposable	14x10x½	1500	1/10	Same Motor		3	2	170	....
L715	....	....	Tecumseh	1½	2	1725	F-22	30.0	1	Disposable	12x21x½	1050	1/6	Same Motor		2	4	140	....
L720	....	....	Tecumseh	2	2	1725	F-22	30.0	1	Disposable	12x21x½	1500	1/4	Same Motor		3	4	185	....
C734	....	....	Tecumseh	¾	1	1725	F-22	14.4	1	Disposable	14x10x½	1500	1/10	Same Motor		2	1	160	....
C7534	....	....	Tecumseh	¾	1	1725	F-22	14.4	1	Disposable	14x10x½	1050	1/20	Same Motor		2	1	160	....
C7110	....	....	Tecumseh	1	1	1725	F-22	19.4	1	Disposable	14x10x½	1500	1/10	Same Motor		3	2	170	....
C710	....	....	Tecumseh	1	2	1725	F-22	19.5	1	Disposable	14x10x½	1500	1/10	Same Motor		3	2	170	....
C715	....	....	Tecumseh	1½	2	1725	F-22	29.0	1	Disposable	13x13x½	1050	1/6	Same Motor		2	4	197	....
C720	....	....	Tecumseh	2	2	1725	F-22	30.5	1	Disposable	13x13x½	1500	1/5	Same Motor		3	4	200	....
A734	....	....	Tecumseh	¾	1	1725	F-22	20.5	1	Disposable	17x13x½	1050	1/10	Same Motor		2	2	165	....
A7534	....	....	Tecumseh	¾	1	1725	F-22	18.0	1	Disposable	17x13x½	1050	1/10	Same Motor		2	2	167	....
A7110	....	....	Tecumseh	1	1	1725	F-22	19.5	1	Disposable	17x13x½	1050	1/10	Same Motor		2	2	175	....
A710	....	....	Tecumseh	1	2	1725	F-22	22.5	1	Disposable	17x13x½	1050	1/8	Same Motor		3	3	175	....
A715	....	....	Tecumseh	1½	2	1725	F-22	27.5	1	Disposable	17x13x½	1050	1/8	Same Motor		2	4	180	....
M257	....	....	Tecumseh	¾	1	1725	F-22	22.5	1	Disposable	13x13x½	1050	1/10	Same Motor		1	3	172	....
M2575	....	....	Tecumseh	¾	1	1725	F-22	19.0	1	Disposable	13x13x½	1050	1/20	Same Motor		1	2	172	....
M2157	....	....	Tecumseh	1	1	1725	F-22	20.0	1	Disposable	13x13x½	1050	1/8	Same Motor		1	3	188	....
M2007	....	....	Tecumseh	1	2	1725	F-22	24.0	1	Disposable	13x13x½	1050	1/8	Same Motor		2	3	188	....

Frigidaire—Frigidaire Div., General Motors Corp., Dayton

Model No.	Height	Width	Depth	Max. Proj.	Cabinet Material	Closing Adapter	Concealed or Exposed	Controls Type	Cooling	Heating	Circ.	Fresh	Exhaust	Volts	Amps.	Watts	Power Factor %
A50-57	*13⅞	14½	36⅛	Flex.	Steel, plastic	....	Concealed	Knob	4,500	....	160	75	....	115	7.4	760	89.1
AE75-57	13⅞	26	37	Flex.	Steel, plastic	....	Concealed	Knob	8,200	....	270	120	75	115/208/230	10.4†	1130	87.8†
AE758-57	13⅞	26	37	Flex.	Steel, plastic	....	Concealed	Knob	6,500	....	270	120	75	115	7.5	880	91
A100-57	13⅞	26	36⅛	Flex.	Steel, plastic	....	Exposed	Knob	9,000	....	300	....	....	230	6.3	1310	87.5
AE100-57	13⅞	26	37	Flex.	Steel, plastic	....	Concealed	Knob	10,000	....	300	140	90	208/230	7.6 6.3	1305	91.2 90.2
AE1008-57	13⅞	26	37	Flex.	Steel, plastic	....	Concealed	Knob	9,100	....	300	140	90	115	11.8	1310	94
AE150-57	16⅞	26	37⅛	Flex.	Steel, plastic	....	Concealed	Knob	14,600	....	375	165	120	208/230	11.5 9.8	2080	89.1 89.3

Model No.	Heating Type	Heating Watts	Compressor Make	Hp.	Cyl.	R.p.m.	Refrigerant Type	Charge (oz.)	Air Filter No.	Air Filter Type	Dimensions	Evaporator R.p.m.	Evaporator Hp.	Condenser R.p.m.	Condenser Hp.	Coil (rows) Evap.	Coil (rows) Cond.	Net Weight	List Price
A50-57	....	....	Frigidaire	½	....	1750	F-22	17	1	Disposable	8¼x10⅞x½	1550	1/15	1550	1/15	3	3	121	$284.95
AE75-57	....	....	Frigidaire	¾	1	1725	F-22	22	1	Disposable	8x22x½	1140	1/12	1140	1/12	3	2	191	349.95
AE758-57	....	....	Frigidaire	¾	1	1725	F-12	26	1	Disposable	8x22x½	1140	1/12	1140	1/12	3	2	191	349.95
A100-57	....	....	Frigidaire	1	2	1725	F-12	30	1	Disposable	8x22x½	1140	1/8	1140	1/8	3	2	188	324.95
AE100-57	....	....	Frigidaire	1	2	1725	F-12	24	1	Disposable	8x22x½	1140	1/8	1140	1/8	4	3	199	364.95
AE1008-57	....	....	Frigidaire	1	1	1725	F-22	22	1	Disposable	8x22x½	1140	1/8	1140	1/8	3	3	190	364.95
AE150-57	....	....	Frigidaire	1½	2	1725	F-22	28	1	Disposable	10⅞x22x½	1140	1/8	1140	1/8	4	3	225	439.95

Rated under ARI standard. *Steps down to 10 11/16 in. at rear. †AE75-57 on 208 volts takes 6 amps, power factor 86.5%; on 230 volts takes 5.5 amps, power factor 87.3%.

General Electric—General Electric Co., Louisville, Ky.

Model No.	Height	Width	Depth	Max. Proj.	Cabinet Material	Closing Adapter	Concealed or Exposed	Controls Type	Cooling	Heating	Circ.	Fresh	Exhaust	Volts	Amps.	Watts	Power Factor %
R31P	20⅝	25	16½	0 to all	Steel	Yes	Exposed	Sliding knob	5,500	....	....	....	....	115	7.5	800	91
R41P	20⅝	25	16½	0 to all	Steel	Yes	Exposed	Sliding knob	6,600	....	....	....	....	115	7.5	900	92
R51P	20⅝	25	16½	0 to all	Steel	Yes	Exposed	Sliding knob	7,500	....	....	....	....	115/230	12.0 6.0	1290	87
R61P	20⅝	25	16½	0 to all	Steel	Yes	Exposed	Sliding knob	9,000	....	....	....	....	115	12.0	1300	94
R71P	20⅝	25	16½	0 to all	Steel	Yes	Exposed	Sliding knob	10,100	....	....	....	....	230	6.8	1480	92
R101P	20⅝	25	19½	0 to all	Steel	Yes	Exposed	Sliding knob	13,350	....	....	....	....	230	10.0	2150	93
R52P	20⅝	25	16½	0 to all	Steel	Yes	Concealed	Sliding knob	7,700	....	....	....	....	115/230	11.0 5.5	1150	92
R72P	20⅝	25	16½	0 to all	Steel	Yes	Concealed	Sliding knob	10,100	....	....	....	....	230	6.8	1480	92
R58P	20⅝	25	16½	0 to all	Steel	Yes	Concealed	Sliding knob	7,400	7,000*	....	....	....	230	5.5	1150	92
R73P	20⅝	25	19½	0 to all	Steel	Yes	Concealed	Sliding knob	9,900	9,900*	....	....	....	230	6.8	1480	92

Model No.	Heating Type	Heating Watts	Compressor Make	Hp.	Cyl.	R.p.m.	Refrigerant Type	Charge (oz.)	Air Filter No.	Air Filter Type	Dimensions	Evaporator R.p.m.	Evaporator Hp.	Condenser R.p.m.	Condenser Hp.	Coil (rows) Evap.	Coil (rows) Cond.	Net Weight	List Price
R31P	....	....	Tecumseh	½	1	1725	F12/G12	18¼	1	Disposable	17⅛x9⅝	....	....	1100	.035	2	2	137	....
R41P	....	....	Tecumseh	⅝	1	1725	F22/G141	22½	1	Disposable	17⅛x9⅝	....	....	1100	.035	2	3	140	....
R51P	....	....	Tecumseh	¾	1	1725	F22/G141	19	1	Disposable	17⅛x9⅝	....	....	1050	1/12	2	2	143	....
R61P	....	....	Tecumseh	1	1	1725	F22/G141	24½	1	Disposable	17⅛x9⅝	....	....	1600/1350	1/20	2	2	148	....
R71P	....	....	Tecumseh	1	2	1725	F22/G141	22	1	Disposable	17⅛x9⅝	....	....	1550/1250	1/20	3	3	154	....
R101P	....	....	Tecumseh	1½	2	1725	F22/G141	31	1	Disposable	17⅛x9⅝	....	....	1630/1350	1/12	3	4	184	....
R52P	....	....	Tecumseh	¾	1	1725	F22/G141	20	2	†	†	....	....	1100	.035	2	2	147	....
R72P	....	....	Tecumseh	1	2	1725	F22/G141	23	2	†	†	....	....	1550/1250	1/20	3	3	156	....
R58P	Rev. C. & Elec.	3,000	Tecumseh	¾	1	1725	F22/G141	20	2	†	†	....	....	1100	.035	2	2	164	....
R73P	Rev. C. & Elec.	3,000	Tecumseh	1	2	1725	F22/G141	23	2	†	†	....	....	....	1/20	3	3	172	....

Rated under ARI standard. *At ASRE conditions—reverse cycle operation below 42° outdoor ambient both units provide 10,245 B.t.u./hr. from 3,000-watt resistance heater. †These units have a permanent filter 17⅛x9⅝x½ and a disposable filter 21½x7⅝x½.

Gibson—Gibson Refrigerator Co., Greenville, Mich.

Model No.	Height	Width	Depth	Max. Proj.	Cabinet Material	Closing Adapter	Concealed or Exposed	Controls Type	Cooling	Heating	Circ.	Fresh	Exhaust	Volts	Amps.	Watts	Power Factor %
A-721C	16⅝	26½	20¾	5	Steel	No	Exposed	Rotary	6,700	None	280	....	....	115	12.0	1120	85
A-121C	16⅝	26½	20¾	5	Steel	No	Exposed	Pushbutton	8,200	None	310	....	55	115	12.0	1200	87
A-731C	16⅝	26½	20¾	5	Steel	No	Exposed	Pushbutton	6,200	None	280	....	45	115	7.5	900	90
A-152C	16⅝	26½	20¾	5	Steel	No	Exposed	Pushbutton	12,000	None	325	....	55	230	12.0	2000	90
A-222C	16⅝	26½	23¾	5	Steel	No	Exposed	Pushbutton	16,000	None	500	....	80	230	12.0	2800	90
A-751C	20½	26½	17⅛	17⅛	Steel	Yes	Exposed	Rotary	6,700	None	275	15	....	115	12.0	1150	87
A-102C	20½	26½	17⅛	17⅛	Steel	Yes	Exposed	Rotary	8,200	None	315	25	....	230	10.0	1250	87
A-131C	20½	26½	17⅛	17⅛	Steel	Yes	Exposed	Pushbutton	8,200	None	315	25	80	115	12.0	1250	87
A-122C	20½	26½	17⅛	17⅛	Steel	Yes	Exposed	Pushbutton	9,000	None	315	25	80	230	10.0	1250	95
A-781C	20½	26½	17⅛	17⅛	Steel	Yes	Concealed	Pushbutton	6,400	None	275	15	65	115	7.5	800	87
A-181C	20½	26½	17⅛	17⅛	Steel	Yes	Concealed	Pushbutton	9,000	None	315	25	80	115	12.0	1250	90

Model No.	Heating Type	Heating Watts	Compressor Make	Hp.	Cyl.	R.p.m.	Refrigerant Type	Charge (oz.)	Air Filter No.	Air Filter Type	Dimensions	Evaporator R.p.m.	Evaporator Hp.	Condenser R.p.m.	Condenser Hp.	Coil (rows) Evap.	Coil (rows) Cond.	Net Weight	List Price
A-721C	None	....	Gibson	¾	1	3500	F-22	....	1	Disposable	11x15x½	1070	1/12	Same Motor		2	2	160	No list
A-121C	None	....	Gibson	1	1	3500	F-22	....	1	Disposable	11x15x½	1070/900	1/10	Same Motor		3	4	175	No list
A-731C	None	....	Gibson	¾	1	3500	F-22	....	1	Disposable	11x15x½	1070/900	1/20	Same Motor		2	3	160	$319.95
A-152C	None	....	Tecumseh	1½	2	1750	F-22	....	1	Disposable	11x15x½	1070/900	1/10	Same Motor		4	4	175	389.95
A-222C	None	....	Tecumseh	2	2	1750	F-22	....	1	Disposable	11x15x½	1550/1300	1/5	Same Motor		4	4	230	489.95
A-751C	None	....	Tecumseh	¾	1	1750	F-22	....	1	Disposable	12x15x½	1050	1/10	Same Motor		3	3	160	No list
A-102C	None	....	Tecumseh	1	1	1750	F-22	....	1	Disposable	12x15x½	1050	1/8	Same Motor		2	3½	175	339.95
A-131C	None	....	Tecumseh	1	1	1750	F-22	....	1	Disposable	12x15x½	1050/900	1/8	Same Motor		2	3½	175	369.95
A-122C	None	....	Tecumseh	1	1	1750	F-22	....	1	Permanent	12x15x½	1050/900	1/8	Same Motor		2	4	175	379.95
A-781C	None	....	Tecumseh	¾	1	1750	F-22	....	1	Permanent	12x15x½	1050/900	1/20	Same Motor		2	4	160	379.95
A-181C	None	....	Tecumseh	1	1	1750	F-22	....	1	Permanent	12x15x½	1050/900	1/8	Same Motor		2	4	175	399.95

Rated under ARI standard.

Hunter—Hunter Div., Robbins & Myers, Inc., Memphis, Tenn.

Model No.	Height	Width	Depth	Max. Proj.	Cabinet Material	Closing Adapter	Concealed or Exposed	Controls Type	Cooling	Heating	Circ.	Fresh	Exhaust	Volts	Amps.	Watts	Power Factor %
75570-229	15⅝	26½	31¼	Flush	Steel	No	Exposed	Knob	7,500	....	295	....	....	115	11.6	1200	90
75571-229	15⅝	26½	31¼	Flush	Steel	No	Exposed	Knob	7,500	....	295	40	80	115	11.6	1200	90
75570-240	15⅝	26½	31¼	Flush	Steel	No	Exposed	Knob	7,500	....	295	....	....	230	5.8	1200	88
75571-240	15⅝	26½	31¼	Flush	Steel	No	Exposed	Knob	7,500	....	295	40	80	230	5.8	1200	88
75570-227	15⅝	26½	31¼	Flush	Steel	No	Exposed	Knob	6,300	....	215	....	....	115	7.5	840	93
100570-240	15⅝	26½	31¼	Flush	Steel	No	Exposed	Knob	9,100	....	370	....	....	230	7.0	1300	85
100571-240	15⅝	26½	31¼	Flush	Steel	No	Exposed	Knob	9,500	....	340	60	100	230	7.0	1300	85
100570-238	15⅝	26½	31¼	Flush	Steel	No	Exposed	Knob	8,000	....	295	....	....	115	12.0	1355	98
100571-238	15⅝	26½	31¼	Flush	Steel	No	Exposed	Knob	8,600	....	350	45	90	115	12.0	1300	97
150570-240	15⅝	26½	31¼	Flush	Steel	No	Exposed	Knob	12,900	....	340	....	....	230	10.0	2050	87
150571-240	15⅝	26½	31¼	Flush	Steel	No	Exposed	Knob	12,900	....	340	65	100	230	10.0	2520	87
200571-240	15⅝	26½	31¼	Flush	Steel	No	Exposed	Knob	15,500	....	414	80	125	230	12.0	2520	94
75578-237	36¼	16⅝	12⅝	12⅝	Steel	Yes	Exposed	Knob	5,600	....	230	....	....	115	7.5	885	96
75579-239	36¼	16⅝	12⅝	12⅝	Steel	Yes	Exposed	Knob	6,600	....	230	60	94	115	11.9	1140	98
50574-239	23	26⅝	18⅝	5	Steel	No	Exposed	Knob	5,300	....	200	30	90	115	7.5	790	90
75574-239	23	26⅝	18⅝	5	Steel	No	Exposed	Knob	7,500	....	290	40	110	115	11.9	1180	87.5
75574-240	23	26⅝	18⅝	5	Steel	No	Exposed	Knob	7,500	....	290	40	110	230	6.0	1180	88.5
100574-240	23	26⅝	18⅝	5	Steel	No	Exposed	Knob	9,000	....	325	50	120	230	7.9	1340	88.5

Model No.	Heating Type	Heating Watts	Compressor Make	Hp.	Cyl.	R.p.m.	Refrigerant Type	Charge (oz.)	Air Filter No.	Air Filter Type	Dimensions	Evaporator R.p.m.	Evaporator Hp.	Condenser R.p.m.	Condenser Hp.	Coil (rows) Evap.	Coil (rows) Cond.	Net Weight	List Price
75570-229	....	....	Tecumseh	¾	....	....	....	....	....	Disposable	11x23½x½	....	1/12	....	1/12	1	3	175	$290.00
75571-229	....	....	Tecumseh	¾	....	....	....	....	....	Disposable	11x23½x½	....	1/12	....	1/12	1	3	175	316.00
75570-240	....	....	Tecumseh	¾	....	....	....	....	....	Disposable	11x23½x½	....	1/12	....	1/12	1	3	175	290.00
75571-240	....	....	Tecumseh	¾	....	....	....	....	....	Disposable	11x23½x½	....	1/12	....	1/12	1	3	175	316.00
75570-227	....	....	Tecumseh	⅝	....	....	....	....	....	Disposable	11x23½x½	....	1/20	....	1/20	1	3	170	299.00
100570-240	....	....	Tecumseh	1	....	....	....	....	....	Disposable	11x23½x½	....	1/10	....	1/10	1	3	180	309.00
100571-240	....	....	Tecumseh	1	....	....	....	....	....	Disposable	11x23½x½	....	1/10	....	1/10	1	4	185	334.00
100570-238	....	....	Tecumseh	1	....	....	....	....	....	Disposable	11x23½x½	....	1/12	....	1/12	1	2	175	309.00
100571-238	....	....	Tecumseh	1	....	....	....	....	....	Disposable	11x23½x½	....	1/10	....	1/10	1	4	180	334.00
150570-240	....	....	Tecumseh	1½	....	....	....	....	....	Disposable	11x23½x½	....	1/10	....	1/10	1	3	195	359.00
150571-240	....	....	Tecumseh	1½	....	....	....	....	....	Disposable	11x23½x½	....	1/10	....	1/10	2	3	195	389.00
200571-240	....	....	Tecumseh	2	....	....	....	....	....	Disposable	11x23½x½	....	1/4	....	1/4	2	3	220	439.00
75578-237	....	....	Tecumseh	⅝	....	....	....	....	....	Disposable	2—8⅝x11¼x⅝	....	....	....	....	1	3	140	329.00
75579-239	....	....	Tecumseh	¾	....	....	....	....	....	Disposable	8⅝x11¼x⅝	....	....	....	....	1	3	140	349.00
50574-239	....	....	Tecumseh	½	....	....	....	....	....	Disposable	23⅝x12⅝x⅝	....	....	....	....	2	3	165	....
75574-239	....	....	Tecumseh	¾	....	....	....	....	....	Disposable	23⅝x12⅝x⅝	....	....	....	....	2	3	180	....
75574-240	....	....	Tecumseh	¾	....	....	....	....	....	Disposable	23⅝x12⅝x⅝	....	....	....	....	2	3	180	....
100574-240	....	....	Tecumseh	1	....	....	....	....	....	Disposable	23⅝x12⅝x⅝	....	....	....	....	2	3	195	....

Rated under ARI standard.

Room Coolers

Hotpoint—Hotpoint Co., Chicago

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Max. Proj.	Cabinet Material	Closing Adapter	Controls Concealed or Exposed	Controls Type	Capacities (B.t.u.h.) Cooling	Heating	Air Capacities (C.f.m.) Circ.	Fresh	Exhaust	Electrical Characteristics Volts	Amps.	Watts	Power Factor %
117AMC50	22	15½	21¼	12	Steel	Yes	Concealed	Pushbutton	5,075	...	225	150	...	115	7.5	780	89
117ADC75	22	15½	21¼	12	Steel	Yes	Concealed	Pushbutton	6,560	...	300	150	...	115	10.0	1040	88
117AM75	16	24½	23½	Flush	Steel	No	Exposed	Dial	6,775	...	320	...	70	115	7.5	820	93
117AMB100	16	24½	23½	Flush	Steel	No	Exposed	Dial	8,197	...	400	...	70	115	11.2	1300	93
127AM100	16	24½	23½	Flush	Steel	No	Exposed	Dial	8,230	...	330	...	50	230	7.1	1400	93
117ADS100	16½	30¼	17	Flush	Steel	Yes	Concealed	Pushbutton	8,535	...	375	55	75	115	10.8	1240	94
127AD100	16½	30¼	17	Flush	Steel	Yes	Concealed	Pushbutton	10,040	...	375	55	75	230	6.9	1400	95
127AM150	16	24½	23½	Flush	Steel	No	Exposed	Dial	11,550	...	400	...	70	230	9.5	1940	90
127AD150	16½	30¼	17	Flush	Steel	Yes	Concealed	Pushbutton	12,380	...	375	55	75	230	9.3	2100	94
127AD200	17¾	27¾	29¼	Flush	Steel	No	Concealed	Pushbutton	15,540	...	550	100	150	230	11.3	2510	96

Model No.	Heating Type	Heating Watts	Compressor Make	Hp.	Cyl.	R.p.m.	Refrigerant Type	Charge (oz.)	No.	Air Filter Type	Dimensions	Fans Evaporator R.p.m.	Evaporator Hp.	Condenser R.p.m.	Condenser Hp.	Coil (rows) Evap.	Cond.	Net Weight	List Price
117AMC50	...	...	Tecumseh	½	1	1725	F-12	18.2	...	Permanent	9 11/16x7 3/16	1050	1/30	Same Motor		2	2	137	$309.95
117ADC75	...	...	Tecumseh	¾	1	1725	F-22	17.0	...	Permanent	9 11/16x7 3/16	1450	1/20	Same Motor		2	2	137	349.95
117AM75	...	...	Tecumseh	¾	1	1725	F-22	22.0	...	Permanent	14⅞x12⅝	1050	1/12	Same Motor		2	3	151	329.95
117AMB100	...	...	Tecumseh	1	1	1725	F-22	22.0	...	Permanent	14⅞x12⅝	1050	1/10	Same Motor		2	3	151	299.95
127AM100	...	...	Tecumseh	1	1	3450	F-12	19.1	...	Permanent	14⅞x12⅝	1050	1/12	Same Motor		2	2	151	290.95
117ADS100	...	...	Tecumseh	1	1	1725	F-22	20.8	...	Permanent	16x11⅝	1500	1/8	Same Motor		2	2	165	379.95
127AD100	...	...	Tecumseh	1	2	1725	F-22	20.9	...	Permanent	14⅞x12⅝	1050	1/10	Same Motor		2	3	176	369.95
127AM150	...	...	Tecumseh	1½	2	1725	F-22	19.8	...	Permanent	14⅞x12⅝	1050	1/10	Same Motor		2	3	176	369.95
127AD150	...	...	Tecumseh	1½	2	1725	F-22	22.6	...	Permanent	16x11⅝	1510	1/8	Same Motor		3	3	170	449.95
127AD200	...	...	Tecumseh	2	2	1725	F-22	26.5	...	Permanent	19⅝x7 11/16	1445	1/4	Same Motor		3	3	218	499.95

Special Features: Lifetime electrostatic filter on all models. Three-speed fans on all AD and ADS models.

Jettronaire—Jettronaire, Inc., Pittsburgh

Model No.	Height	Width	Depth	Max. Proj.	Cabinet Material	Closing Adapter	Concealed or Exposed	Type	Cooling	Heating	Circ.	Fresh	Exhaust	Volts	Amps.	Watts	Power Factor %
¾ H.P.	20½	26½	17½	17	Steel	Yes	Concealed	Knob & P.B.	6,200	...	...	15	65	115	7.5	800	90
¾ H.P.	20½	26½	17½	17	Steel	Yes	Concealed	Knob & P.B.	5,800	...	...	15	65	115	12.0	1150	85
1 H.P.	20½	26½	17½	17	Steel	Yes	Concealed	Knob & P.B.	8,200	...	...	25	80	115	12.0	1250	90
1 H.P.	20½	26½	17½	17	Steel	Yes	Concealed	Knob & P.B.	8,200	...	...	25	80	230	9.0	1250	87
1½ H.P.	*16⅝	26½	30¼	5	Steel	Yes	Exposed	Knob & P.B.	11,500	...	...	...	...	230	9.5	1400	88

Model No.	Heating Type	Heating Watts	Make	Hp.	Cyl.	R.p.m.	Refrigerant Type	Charge (oz.)	No.	Air Filter Type	Dimensions	Evap. R.p.m.	Evap. Hp.	Cond. R.p.m.	Cond. Hp.	Coil Evap.	Coil Cond.	Net Weight	List Price
¾ H.P.	...	...	Tecumseh	¾	1	1750	F-22	...	1	Disposable	12x15	1050	1/10	1050	1/10	2	4	160	...
¾ H.P.	...	...	Tecumseh	¾	1	1750	F-22	...	1	Disposable	12x15	1050	1/10	1050	1/10	2	3	160	...
1 H.P.	...	...	Tecumseh	1	1	1750	F-22	...	1	Disposable	12x15	1050	1/8	1050	1/8	2	3½	175	...
1 H.P.	...	...	Tecumseh	1	1	1750	F-22	...	1	Disposable	12x15	1050	1/8	1050	1/8	2	3½	175	...
1½ H.P.	...	...	Tecumseh	1½	2	1750	F-22	...	1	Disposable	13x14	1070	1/10	1070	1/10	4	4	175	...

Rated under ARI standard.

Kauffman—Kauffman Air Conditioning Co., St. Louis

Model No.	Height	Width	Depth	Max. Proj.	Cabinet Material	Closing Adapter	Concealed or Exposed	Type	Cooling	Heating	Circ.	Fresh	Exhaust	Volts	Amps.	Watts	Power Factor %
X-H	16	27	28	8	Steel	No	Concealed	Knob	6,400	7,000	220	...	35	115	...	1100	85
J-H	16	27	28	8	Steel	No	Concealed	Knob	9,500	7,000	340	...	50	230	...	1700	85
K-H	16	27	28	8	Steel	No	Concealed	Knob	12,000	7,000	400	...	75	230	...	2100	85
L-H	16	27	28	8	Steel	No	Concealed	Knob	15,000	7,000	500	...	120	230	...	3400	85
I-W 50	16	27	19	4	Steel	No	Concealed	Knob	4,200	...	175	...	25	115	...	750	85
I-W 75	16	27	19	4	Steel	No	Concealed	Knob	6,600	...	220	...	50	230	...	1100	85
I-W 100	16	27	19	4	Steel	No	Concealed	Knob	9,500	...	340	...	75	230	...	1700	85
W	40	21	20	20	Steel	Yes	Exposed	Knob	6,400	...	220	...	25	115	...	1100	85
A	40	31	20	20	Steel	Yes	Exposed	Knob	9,500	...	340	...	50	230	...	2000	85
B	52	29	25	25	Steel	Yes	Exposed	Knob	12,000	...	400	...	75	230	...	2300	85
C	52	29	25	25	Steel	Yes	Exposed	Knob	15,000	...	500	...	125	230	...	2700	85

Model No.	Heating Type	Heating Watts	Make	Hp.	Cyl.	R.p.m.	Refrigerant Type	Charge (oz.)	No.	Air Filter Type	Dimensions	Evap. R.p.m.	Evap. Hp.	Cond. R.p.m.	Cond. Hp.	Coil Evap.	Coil Cond.	Net Weight	List Price
X-H	...	7000	Tecumseh	¾	1	1750	F-22	16	1	Permanent	11x11	...	1/12	Same Motor		2	2	150	$320.00
J-H	...	7000	Tecumseh	1	2	1750	F-22	21	1	Permanent	12x12	...	1/12	Same Motor		2	3	180	330.00
K-H	...	7000	Tecumseh	1½	2	1750	F-22	27	1	Permanent	12x14	...	1/10	Same Motor		3	3	300	400.00
L-H	...	7000	Tecumseh	2	2	1750	F-22	31	1	Permanent	12x14	...	1/10	Same Motor		3	3	240	450.00
I-W 50	...	7000	Tecumseh	½	1	1750	F-22	12	1	Permanent	11x11	...	1/12	Same Motor		2	2	135	316.00
I-W 75	...	7000	Tecumseh	¾	2	1750	F-22	16	1	Permanent	12x12	...	1/12	Same Motor		2	3	156	335.00
I-W 100	...	7000	Tecumseh	1	2	1750	F-22	21	1	Permanent	12x14	...	1/10	Same Motor		2	3	190	420.00
W	...	Opt.	Tecumseh	¾	2	1750	F-22	16	1	Permanent	10x20	1050	1/8	1050	1/6	2	4	320	665.00
A	...	Opt.	Tecumseh	1	2	1750	F-22	20	1	Permanent	12x20	1050	1/8	1050	1/6	2	4	375	755.00
B	...	Opt.	Tecumseh	1½	2	1750	F-22	30	1	Permanent	12x24	1050	1/6	1050	1/6	3	6	450	988.00
C	...	Opt.	Tecumseh	2	2	1750	F-22	45	1	Permanent	14x24	1060	1/6	1050	1/6	3	6	535	1045.00

Rated under ARI standard. Models W, A, B, C are floor type. Others also available in direct current with open-type compressors.

Kelvinator and Leonard—Kelvinator Div., American Motors Corp., Detroit

Model No.	Height	Width	Depth	Max. Proj.	Cabinet Material	Closing Adapter	Concealed or Exposed	Type	Cooling	Heating	Circ.	Fresh	Exhaust	Volts	Amps.	Watts	Power Factor %
RCG-78C	22	15½	21⅜	9⅝	Steel	Yes	Concealed	Knob	6,560	...	300	150	...	115/230	11.5	...	88
RCG-78RS	16	24½	23½	9⅝	Steel	No	Exposed	Knob	6,775	...	320	...	50	115	7.5	...	93
RCG-101R	16	24½	23½	9⅝	Steel	No	Exposed	Knob	8,230	...	320	...	...	230	7.2	...	93
RCG-108RS	16	24½	23½	9⅝	Steel	No	Exposed	Knob	8,195	...	400	...	70	115	11.2	...	93
RCG-108R	16	24½	23½	9⅝	Steel	No	Exposed	Knob	9,340	...	400	...	70	230	7.1	...	89
RCG-158R	16	24½	23½	9⅝	Steel	No	Exposed	Knob	11,550	...	400	...	70	230	10.0	...	90
RCG-109WS	16½	30¼	17¾	*	Steel	No	Exposed	Knob & P.B.	8,535	...	375	55	75	115	10.8	...	94
RCG-109W	16½	30¼	17¾	*	Steel	No	Exposed	Knob & P.B.	10,040	...	375	55	75	230	6.9	...	95
RCG-159W	16½	30¼	17¾	*	Steel	No	Exposed	Knob & P.B.	12,380	...	375	55	75	230	9.3	...	94
RCG-209R	17¾	28⅝	29¾	15	Steel	No	Concealed	Knob & P.B.	15,540	...	550	100	150	230	11.3	...	96

Model No.	Heating Type	Heating Watts	Make	Hp.	Cyl.	R.p.m.	Refrigerant Type	Charge (oz.)	No.	Air Filter Type	Dimensions	Evap. R.p.m.	Evap. Hp.	Cond. R.p.m.	Cond. Hp.	Coil Evap.	Coil Cond.	Net Weight	List Price
RCG-78C	...	...	Tecumseh	¾	1	1725	F-22	...	...	Disposable	...	1550	1/20	Same Motor		2	3	129	...
RCG-78RS	...	...	Tecumseh	¾	1	1725	F-22	...	...	Disposable	14¾x12⅝x½	1050	1/12	Same Motor		2	2	153	...
RCG-101R	...	...	Tecumseh	1	1	3450	F-12	...	...	Disposable	14¾x12⅝x½	1050	1/12	Same Motor		2	2	161	...
RCG-108RS	...	...	Tecumseh	1	1	1725	F-22	...	...	Disposable	14¾x12⅝x½	1050	1/10	Same Motor		2	2	161	...
RCG-108R	...	...	Tecumseh	1	2	1725	F-22	...	...	Disposable	14¾x12⅝x½	1050	1/10	Same Motor		2	3	178	...
RCG-158R	...	...	Tecumseh	1½	2	1725	F-22	...	...	Disposable	14¾x12⅝x½	1050	1/10	Same Motor		2	3	216	...
RCG-109WS	...	...	Tecumseh	1	1	1725	F-22	...	...	Disposable	16x11⅝x½	1530	1/8	Same Motor		2	3	165	...
RCG-109W	...	...	Tecumseh	1	2	1725	F-22	...	...	Disposable	16x11⅝x½	1530	1/8	Same Motor		2	2	165	...
RCG-159W	...	...	Tecumseh	1½	2	1725	F-22	...	...	Disposable	16x11⅝x½	1530	1/8	Same Motor		3	3	170	...
RCG-209R	...	...	Tecumseh	2	2	1725	F-22	...	...	Disposable	2—7¾x19⅝x½	1550	1/4	Same Motor		3	3	230	...

Rated under ARI standard. *For thru-wall installation, maximum projection will be 17¾ in., less total wall thickness. Special Features: Adjustable louvers to direct air in two directions at once, making units capable of cooling two rooms.

King—King Refrigerator Corp., Glendale, L. I., N. Y.

Model No.	Height	Width	Depth	Max. Proj.	Cabinet Material	Closing Adapter	Concealed or Exposed	Type	Cooling	Heating	Circ.	Fresh	Exhaust	Volts	Amps.	Watts	Power Factor %
SL758	20½	25	16½	...	Steel, plastic	...	Exposed	Knob	6,500	...	...	...	...	115	9.0	970	90
SLA57	20½	25	16½	...	Steel, plastic	...	Exposed	Pushbutton	6,800	...	...	...	...	115	7.5	880	90
SL1115	20½	25	16½	...	Steel, plastic	...	Exposed	Pushbutton	9,200	...	...	...	...	115	12.0	1300	90
SL1000	20½	25	16½	...	Steel, plastic	...	Exposed	Pushbutton	10,500	...	...	...	...	230	6.8	1450	90

Model No.	Heating Type	Heating Watts	Make	Hp.	Cyl.	R.p.m.	Refrigerant Type	Charge (oz.)	No.	Air Filter Type	Dimensions	Evap. R.p.m.	Evap. Hp.	Cond. R.p.m.	Cond. Hp.	Coil Evap.	Coil Cond.	Net Weight	List Price
SL758	...	...	Tecumseh	¾	1	1725	F-22	...	...	Permanent	14x10½x½	1050	1/30	Same Motor		2	2	175	...
SLA57	...	...	Tecumseh	¾	1	1725	F-22	...	...	Permanent	14x10½x½	1050	1/30	Same Motor		2	2	182	...
SL1115	...	...	Tecumseh	1	1	1725	F-22	...	...	Permanent	14x10½x½	1550	1/20	Same Motor		2	3	188	...
SL1000	...	...	Tecumseh	1	2	1725	F-22	...	...	Permanent	14x10½x½	1550	1/20	Same Motor		3	3	191	...

Rated under ARI standard. Special Features: Slide-out Chassis—Choice of installations thru-the-wall.

Kool-a-Bout—Whitehall Engineering Co., Chicago

Model No.	Height	Width	Depth	Max. Proj.	Cabinet Material	Closing Adapter	Concealed or Exposed	Type	Cooling	Heating	Circ.	Fresh	Exhaust	Volts	Amps.	Watts	Power Factor %
WK 11D	31	19	18	...	Steel	...	Concealed	Pushbutton	10,300	...	385/325	...	...	115	9.5	1/30	...

Model No.	Heating Type	Heating Watts	Make	Hp.	Cyl.	R.p.m.	Refrigerant Type	Charge (oz.)	No.	Air Filter Type	Dimensions	Evap. R.p.m.	Evap. Hp.	Cond. R.p.m.	Cond. Hp.	Coil Evap.	Coil Cond.	Net Weight	List Price
WK 11D	None	...	Tecumseh	¾	...	...	F-22	...	...	Permanent	12½x16x½	1450	1/30	...	...	8	...	164	$379.95

Rated under ARI standard. Special Features: Unit can be installed with special rubber tubing allowing it to be moved from room to room or can be installed with permanent piping.

Manning Bowman—Lonergan Coolerator Div., McGraw-Edison Co., Albion, Mich.

Model No.	Height	Width	Depth	Max. Proj.	Cabinet Material	Closing Adapter	Concealed or Exposed	Type	Cooling	Heating	Circ.	Fresh	Exhaust	Volts	Amps.	Watts	Power Factor %
MB-74CD5	15⅝	26⅝	24	...	Steel	No	Exposed	Pushbutton	...	...	410	...	...	115	7.5	...	94
MB-100CD5	15⅝	26⅝	24	...	Steel	No	Exposed	Pushbutton	...	...	550	...	...	115	12.0	...	90
MB-101CDO	15⅝	26⅝	24	...	Steel	No	Exposed	Pushbutton	...	...	690	...	...	230	8.0	...	86
MB-203CDO	17¾	26⅝	30	...	Steel	No	Exposed	Pushbutton	...	...	1100	...	...	230	13.0	...	88
MB-7WCD5	20⅝	25⅝	16⅝	...	Steel, plastic	No	Exposed	Pushbutton	...	...	410	...	...	115	7.5	...	91
MB-1WCD5	20⅝	25⅝	16⅝	...	Steel, plastic	No	Exposed	Pushbutton	...	...	550	...	...	115	12.0	...	94
MB-1WCS5T	20⅝	25⅝	16⅝	...	Steel, plastic	No	Exposed	Pushbutton	...	...	...	...	...	115	12.0	...	88
MB-15WCDO	20⅝	25⅝	16⅝	...	Steel, plastic	No	Exposed	Pushbutton	...	...	...	...	...	230	...	...	88

Model No.	Heating Type	Heating Watts	Make	Hp.	Cyl.	R.p.m.	Refrigerant Type	Charge (oz.)	No.	Air Filter Type	Dimensions	Evap. R.p.m.	Evap. Hp.	Cond. R.p.m.	Cond. Hp.	Coil Evap.	Coil Cond.	Net Weight	List Price
MB-74CD5	...	...	Tecumseh	¾	1	...	F	22	2	Disposable	9⅜x19¼x½	1050/900	...	Same Motor		...	...	181	$349.95
MB-100CD5	...	...	Tecumseh	1	1	...	F	22	2	Disposable	9⅜x19¼x½	1050/900	...	Same Motor		...	...	196	349.95
MB-101CDO	...	...	Tecumseh	1	1	...	F	22	2	Disposable	9⅜x19¼x½	1050/900	...	Same Motor		...	...	208	349.95
MB-203CDO	...	...	Tecumseh	2	1	...	F	22	2	Disposable	11⅜x19¼x½	1050/900	...	Same Motor		...	...	250	499.95
MB-7WCD5	...	...	Tecumseh	¾	1	...	F	22	2	Permanent	8¼x18⅜x½	1050/900	...	Same Motor		...	...	175	349.95
MB-1WCD5	...	...	Tecumseh	1	1	...	F	22	2	Permanent	8¼x18⅜x½	1050/900	...	Same Motor		...	...	190	349.95
MB-1WCS5T	...	...	Tecumseh	1	1	...	F	22	1	Disposable	8¼x18⅜x½	1000	...	Same Motor		...	...	...	329.95
MB-15WCDO	...	...	Tecumseh	1½	1	...	F	22	2	Permanent	8¼x18⅜x½	1000	...	Same Motor		...	...	...	329.95

Mitchell—Mitchell Mfg. Co., Chicago

Model No.	Height	Width	Depth	Max. Proj.	Cabinet Material	Closing Adapter	Concealed or Exposed	Type	Cooling	Heating	Circ.	Fresh	Exhaust	Volts	Amps.	Watts	Power Factor %
M-157	14¼	22¼	24⅛	4	Steel, plastic	No	Exposed	Knob	...	...	280	...	...	115	11.5	1150	91
M-1575	14¼	22¼	24⅛	4	Steel, plastic	No	Exposed	Knob	...	...	280	...	...	115	7.5	740	92
M-1057	14¼	22¼	24⅛	4	Steel, plastic	No	Exposed	Knob	...	...	300	...	...	230	6.8	1425	90
M-1157	14¼	22¼	24⅛	4	Steel, plastic	No	Exposed	Knob	...	...	300	...	...	115	12.0	1350	90
M-1257	14¾	25⅝	24⅛	3	Steel, plastic	No	Exposed	Knob	...	...	350	...	...	230	8.5	1875	92
M-12357	14¾	25⅝	24⅛	3	Steel, plastic	No	Exposed	Knob	...	...	350	...	...	230	12.0	2350	92
M-557	14¼	22¼	24⅛	3	Steel, plastic	No	Exposed	Knob	...	...	280	80	...	115	11.5	1150	91
M-5575	14¼	22¼	24⅛	3	Steel, plastic	No	Exposed	Knob	...	...	260	80	...	115	7.5	740	92
M-5175	14¼	22¼	24⅛	3	Steel, plastic	No	Exposed	Knob	...	...	300	100	...	115	12.0	1350	90
M-5075	14¼	22¼	24⅛	3	Steel, plastic	No	Exposed	Knob	...	...	300	100	...	230	6.8	1425	90
M-257	14¾	25½	26	2½	Steel, plastic	No	Concealed	Knob	...	...	285	80	90	115	11.8	1180	90
M-2575	14¾	25½	26	2½	Steel, plastic	No	Concealed	Knob	...	...	260	80	80	115	7.5	830	90
M-2157	14¾	25½	26	2½	Steel, plastic	No	Concealed	Knob	...	...	300	90	90	115	12.0	1350	92
M-2007	14¾	25½	26	2½	Steel, plastic	No	Concealed	Knob	...	...	300	100	90	230	8.5	1500	90
M-2257	14¾	25½	26	2½	Steel, plastic	No	Concealed	Knob	...	...	320	100	100	230	9.5	2000	90
M-2357	14¾	25½	26	2½	Steel, plastic	No	Concealed	Knob	...	...	350	125	100	230	12.5	2500	92
M-357	16¼	26⅝	28⅝	2½	Steel, plastic	No	Concealed	Knob	...	...	325	100	175	115	11.8	1150	91
M-3357	16¼	26⅝	28⅝	2½	Steel, plastic	No	Concealed	Knob	...	...	430	125	200	230	13.5	2850	92
M-457	21	26⅝	16¼	2½	Steel, plastic	No	Exposed	Knob	...	...	280	80	70	115	11.8	1150	90
M-4575	21	26⅝	16¼	2½	Steel, plastic	No	Exposed	Knob	...	...	265	80	70	115	7.5	850	92
M-4157	21	26⅝	16¼	2½	Steel, plastic	No	Exposed	Knob	...	...	300	100	90	115	12.0	1350	90
M-4007	21	26⅝	16¼	2½	Steel, plastic	No	Exposed	Knob	...	...	300	100	90	230	8.0	1500	90
M-4257	21	26⅝	16¼	2½	Steel, plastic	No	Exposed	Knob	...	...	340	120	110	230	9.5	1900	92
M-3457	25⅝	15½	21⅞	11	Steel, plastic	No	Exposed	Knob	...	...	300	50	...	115	11.8	1100	91
M-3757	25⅝	15½	21⅞	11	Steel, plastic	No	Exposed	Knob	...	...	240	50	...	115	7.5	740	92
M-3057	25⅝	15½	21⅞	11	Steel, plastic	No	Exposed	Knob	...	...	310	50	...	230	7.5	1450	90
M-30157	25⅝	15½	21⅞	11	Steel, plastic	No	Exposed	Knob	...	...	310	50	...	115	12.0	1350	90
M-3367	15	32	15½	2½	Steel, plastic	No	Exposed	Knob	...	...	280	75	100	115	11.8	1150	90
M-3957	15	32	15½	2½	Steel, plastic	No	Exposed	Knob	...	...	280	75	100	115	...	...	90
M-3067	15	32	17½	2½	Steel, plastic	No	Exposed	Knob	...	...	320	75	100	230	7.5	1450	90
M-3167	15	32	17½	2½	Steel, plastic	No	Exposed	Knob	...	...	320	75	100	115	12.0	1350	90

Model No.	Heating Type	Heating Watts	Make	Hp.	Cyl.	R.p.m.	Refrigerant Type	Charge (oz.)	No.	Air Filter Type	Dimensions	Evap. R.p.m.	Evap. Hp.	Cond. R.p.m.	Cond. Hp.	Coil Evap.	Coil Cond.	Net Weight	List Price
M-157	...	...	Tecumseh	¾	...	...	F-22	...	1	Disposable	14x10	...	...	...	...	...	...	160	$289.95
M-1575	...	...	Tecumseh	¾	...	...	F-22	...	1	Disposable	14x10	...	...	...	...	...	...	160	329.95
M-1057	...	...	Tecumseh	1	...	...	F-22	...	1	Disposable	14x10	...	...	...	...	...	...	170	319.95
M-1157	...	...	Tecumseh	1	...	...	F-22	...	1	Disposable	14x10	...	...	...	...	...	...	170	349.95
M-1257	...	...	Tecumseh	1½	...	...	F-22	...	1	Disposable	12x21	...	...	...	...	...	...	180	389.95
M-12357	...	...	Tecumseh	2	...	...	F-22	...	1	Disposable	12x21	...	...	...	...	...	...	186	419.95
M-557	...	...	Tecumseh	¾	...	...	F-22	...	1	Disposable	14x10	...	...	...	...	...	...	160	339.95
M-5575	...	...	Tecumseh	¾	...	...	F-22	...	1	Disposable	14x10	...	...	...	...	...	...	160	369.95
M-5175	...	...	Tecumseh	1	...	...	F-22	...	1	Disposable	14x10	...	...	...	...	...	...	170	369.95
M-5075	...	...	Tecumseh	1	...	...	F-22	...	1	Disposable	14x10	...	...	...	...	...	...	170	359.95
M-257	...	...	Tecumseh	¾	...	...	F-22	...	1	Disposable	21x13	...	...	...	...	...	...	180	389.95
M-2575	...	...	Tecumseh	¾	...	...	F-22	...	1	Disposable	21x13	...	...	...	...	...	...	172	399.95
M-2157	...	...	Tecumseh	1	...	...	F-22	...	1	Disposable	21x13	...	...	...	...	...	...	188	399.95
M-2007	...	...	Tecumseh	1	...	...	F-22	...	1	Disposable	21x13	...	...	...	...	...	...	188	399.95
M-2257	...	...	Tecumseh	1½	...	...	F-22	...	1	Disposable	21x13	...	...	...	...	...	...	197	429.95
M-2357	...	...	Tecumseh	2	...	...	F-22	...	1	Disposable	21x13	...	...	...	...	...	...	200	469.95
M-357	Electric	...	Tecumseh	¾	...	...	F-22	...	1	Disposable	15x23	...	...	...	...	...	...	194	469.95
M-3357	Electric	...	Tecumseh	2	...	...	F-22	...	1	Disposable	15x23	...	...	...	...	...	...	270	499.95
M-457	...	...	Tecumseh	¾	...	...	F-22	...	1	Disposable	17x13	...	...	...	...	...	...	165	369.95
M-4575	...	...	Tecumseh	¾	...	...	F-22	...	1	Disposable	17x13	...	...	...	...	...	...	165	379.95
M-4157	...	...	Tecumseh	1	...	...	F-22	...	1	Disposable	17x13	...	...	...	...	...	...	175	379.95
M-4007	...	...	Tecumseh	1	...	...	F-22	...	1	Disposable	17x13	...	...	...	...	...	...	175	369.95
M-4257	...	...	Tecumseh	1½	...	...	F-22	...	1	Disposable	17x13	...	...	...	...	...	...	180	419.95
M-3457	...	...	Tecumseh	¾	...	...	F-22	...	2	Disposable	8½x11	...	...	...	...	...	...	155	389.95
M-3757	...	...	Tecumseh	¾	...	...	F-22	...	2	Disposable	8½x11	...	...	...	...	...	...	155	399.95
M-3057	...	...	Tecumseh	1	...	...	F-22	...	2	Disposable	8½x11	...	...	...	...	...	...	165	409.95
M-30157	...	...	Tecumseh	1	...	...	F-22	...	2	Disposable	8½x11	...	...	...	...	...	...	165	409.95
M-3367	...	...	Tecumseh	¾	...	...	F-22	...	1	Disposable	13x12	...	...	...	...	...	...	200	399.95
M-3957	...	...	Tecumseh	¾	...	...	F-22	...	1	Disposable	13x12	...	...	...	...	...	...	200	409.95
M-3067	...	...	Tecumseh	1	...	...	F-22	...	1	Disposable	13x12	...	...	...	...	...	...	220	419.95
M-3167	...	...	Tecumseh	1	...	...	F-22	...	1	Disposable	13x12	...	...	...	...	...	...	220	399.95

Mueller Climatrol—Mueller Climatrol Div. of Worthington Corp., Milwaukee

Model No.	Height	Width	Depth	Max. Proj.	Cabinet Material	Closing Adapter	Concealed or Exposed	Type	Cooling	Heating	Circ.	Fresh	Exhaust	Volts	Amps.	Watts	Power Factor %
930-100	30	40	21	15½	Steel	No	Concealed	Pushbutton	11,400	17,000	380	100	100	230/208	8.1/9.2	1440	...
930-101	23⅝	37	26½	13⅞	Steel	No	Concealed	Pushbutton	11,400	17,000	380	100	100	230/208	8.1/9.2	1440	...

Model No.	Heating Type	Heating Watts	Make	Hp.	Cyl.	R.p.m.	Refrigerant Type	Charge (oz.)	No.	Air Filter Type	Dimensions	Evap. R.p.m.	Evap. Hp.	Cond. R.p.m.	Cond. Hp.	Coil Evap.	Coil Cond.	Net Weight	List Price
930-100	Steam/Hot Water	...	Tecumseh	1	2	1725	R-22	30.9	1	Permanent	27x9¾x1	1050	35 mhp	1550	1/15	3	4	370*	...
930-101	Steam/Hot Water	...	Tecumseh	1	2	1725	R-22	32.2	1	Permanent	27x9¾x½	1050	35 mhp	1550	1/15	3	4	...	...

Rated under ARI standard. Heating rated at 2 lbs. steam. *Approximate shipping weight.

National—National Steel Construction Co., Inc. of Indiana, Logansport, Ind.

Model No.	Height	Width	Depth	Max. Proj.	Cabinet Material	Closing Adapter	Concealed or Exposed	Type	Cooling	Heating	Circ.	Fresh	Exhaust	Volts	Amps.	Watts	Power Factor %
N548	15¼	26¼	33½	12¾	Steel	No	Exposed	Knob	6,300	...	225	225	...	115	12	...	...
NT504D	15½	26¼	33⅛	12⅝	Steel, wood	No	Concealed	Knob	6,400	...	250	250	...	115	12	...	...
NT754D	16	26¼	35¼	10⅝	Steel, wood	No	Concealed	Knob	8,700	...	306	306	...	115/208/230	*	...	...
NT104D	16	26¼	35¼	10⅝	Steel, wood	No	Concealed	Knob	11,500	...	376	376	...	208/220	11	...	...

Model No.	Heating Type	Heating Watts	Make	Hp.	Cyl.	R.p.m.	Refrigerant Type	Charge (oz.)	No.	Air Filter Type	Dimensions	Evap. R.p.m.	Evap. Hp.	Cond. R.p.m.	Cond. Hp.	Coil Evap.	Coil Cond.	Net Weight	List Price
N548	—	...	Tecumseh	½	1	...	F-12	19	...	Disposable	9x14	1750†	1/20	...	...	...	...	230	...
NT504D	—	...	Tecumseh	½	1	...	F-12	20	...	Disposable	10x20	1750†	1/20	...	...	...	...	232	...
NT754D	Electric	...	Tecumseh	¾	2	...	F-12	28	...	Disposable	10x20	1750†	1/15	...	...	...	...	250	...
NT104D	Electric	...	Tecumseh	1	1	...	F-22	31	...	Disposable	10x20	1750†	1/15	...	...	...	...	265	...

†1150 r.p.m. at low speed.

Special Features: Side outlet condenser air (use separate condenser fan motor). Evaporative condensate disposal instead of slinger fan. *16.5 amps. at 115 volts, 9 amps. at 208, 220 volts.

Olympic—Olympic Radio & Television, Inc., Long Island City, N. Y.

Model No.	Height	Width	Depth	Max. Proj.	Cabinet Material	Closing Adapter	Concealed or Exposed	Type	Cooling	Heating	Circ.	Fresh	Exhaust	Volts	Amps.	Watts	Power Factor %
OW775D	16⅝	26½	30⅝	5	Steel, plastic	Yes	Concealed	Knob	6,200	...	280	...	...	115	7.5	800	90
OW7100D	16⅝	26½	30⅝	5	Steel, plastic	Yes	Concealed	Knob	8,200	...	320	...	...	115	12.0	1200	87
OW6100D	16⅝	26½	30⅝	5	Steel, plastic	Yes	Concealed	Knob & P.B.	9,400	...	340	...	...	230	8.0	1340	86
OW7200D	16⅝	26½	33⅝	5	Steel, plastic	Yes	Concealed	Knob & P.B.	16,000	...	500	...	...	230	12.0	2800	90
OT785C	20½	26½	17½	4	Steel, plastic	Yes	Concealed	Knob & P.B.	6,200	...	280	15	65	115	7.5	800	90
OT7110C	20½	26½	17½	4	Steel, plastic	Yes	Concealed	Knob & P.B.	8,200	...	340	25	80	115	12.0	1150	90

Model No.	Heating Type	Heating Watts	Make	Hp.	Cyl.	R.p.m.	Refrigerant Type	Charge (oz.)	No.	Air Filter Type	Dimensions	Evap. R.p.m.	Evap. Hp.	Cond. R.p.m.	Cond. Hp.	Coil Evap.	Coil Cond.	Net Weight	List Price
OW775D	...	...	Gibson	¾	1	3500	F-22	21	1	Disposable	13x14	1070	.035	Same Motor		2	3	160	...
OW7100D	...	...	Gibson	1	1	3500	F-22	29	1	Disposable	13x14	1070	1/10	Same Motor		3	3	175	...
OW6100D	...	...	Tecumseh	1	2	1750	F-22	26	1	Disposable	13x14	1070	1/10	Same Motor		3	4	175	...
OW7200D	...	...	Tecumseh	2	2	1750	F-22	33	1	Disposable	13x14	1550	1/5	Same Motor		4	4	230	...
OT785C	...	...	Tecumseh	¾	1	1750	F-22	19.5	2	Permanent	12x15	1050	1/10	Same Motor		2	4	160	...
OT7110C	...	...	Tecumseh	1	1	1750	F-22	19.5	2	Permanent	12x15	1050	1/8	Same Motor		2	4	175	...

Rated under ARI standard. Special Features: Separate fresh air filter (OT785C and OT7110C), slide-out chassis.

Perfection—Perfection Industries, Div. of Hupp Corp., Cleveland

Model No.	Height	Width	Depth	Max. Proj.	Cabinet Material	Closing Adapter	Concealed or Exposed	Type	Cooling	Heating	Circ.	Fresh	Exhaust	Volts	Amps.	Watts	Power Factor %
A341A	20½	26½	17½	4	Steel, plastic	No	Concealed	Pushbutton	7,000	...	275	15	65	115	7.5	800	90
A100A	20½	26½	17½	4	Steel, plastic	No	Concealed	Pushbutton	9,000	...	315	25	80	115	12.0	1250	95
A340A	20½	26½	17½	4	Steel, plastic	No	Exposed	Knob	5,800	...	275	15	N.A.	115	12.0	1150	87
A101B	20½	26½	17½	4	Steel, plastic	No	Exposed	Knob	6,700	...	315	25	N.A.	230	10.0	1250	87
A151B	16⅝	26½	30¼	5	Steel, plastic	No	Exposed	Pushbutton	12,000	...	325	N.A.	55	230	12.0	2000	90
A200B	16⅝	26½	30¼	5	Steel, plastic	No	Exposed	Pushbutton	16,000	...	500	N.A.	80	230	12.0	2600	90

Model No.	Heating Type	Heating Watts	Make	Hp.	Cyl.	R.p.m.	Refrigerant Type	Charge (oz.)	No.	Air Filter Type	Dimensions	Evap. R.p.m.	Evap. Hp.	Cond. R.p.m.	Cond. Hp.	Coil Evap.	Coil Cond.	Net Weight	List Price
A341A	...	...	Tecumseh	¾	...	1725	F-22	...	1	Permanent	12x15	1050/900	1/20	Same Motor		2	4	160	$369.95
A100A	...	...	Tecumseh	1	...	1750	F-22	...	1	Permanent	12x15	1050/900	1/8	Same Motor		2	4	175	389.95
A340A	...	...	Tecumseh	¾	...	1725	F-22	...	1	Disposable	12x15	1050	1/10	Same Motor		2	3	160	279.95
A101B	...	...	Tecumseh	1	...	1750	F-22	...	1	Disposable	12x15	1050	1/8	Same Motor		2	3½	175	329.95
A151B	...	...	Tecumseh	1½	...	1750	F-22	...	1	Disposable	11x15	1070/900	1/10	Same Motor		4	4	175	349.95
A200B	...	...	Tecumseh	2	...	1750	F-22	...	1	Disposable	11x15	1550/1300	1/5	Same Motor		4	4	220	449.95

Rated under ARI standard.

Room Coolers

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Max. Proj.	Cabinet Material	Closing Adapter	Controls Concealed or Exposed	Controls Type	Capacities (B.t.u.h.) Cooling	Capacities (B.t.u.h.) Heating	Air Capacities (C.f.m.) Circ.	Air Capacities (C.f.m.) Fresh	Air Capacities (C.f.m.) Exhaust	Electrical Characteristics Volts	Amps.	Watts	Power Factor %
Philco—Philco Corp., Philadelphia																	
A873-2	15⅝	26¼	30⅝	6¼	Steel, plastic	No	Exposed	Knob	...	...	295	95	...	115	7.5	850	...
A-1071-2	15⅝	26¼	30⅝	6¼	Steel, plastic	No	Exposed	Knob	...	...	310	100	...	115	12.0	1230	...
A1071-11	15⅝	26¼	30⅝	6¼	Steel, plastic	No	Exposed	Knob	...	...	310	100	...	230	7.5	1540	...
A1072-2	16	25⅞	29¼	2½	Steel, plastic	Yes	Exposed	Knob	...	...	310	70	...	115	12.0	1350	...
A1072-23	16	25⅞	30¼	2½	Steel, plastic	Yes	Exposed	Knob	...	...	310	70	...	230/208	7.5/8.5	1540	...
A1074-2	16	25⅞	23⅝	6	Steel, plastic	Yes	Concealed	Pushbutton	...	...	310	100	...	115	12.0	1350	...
A1074-23	16	25⅞	23⅝	6	Steel, plastic	Yes	Concealed	Pushbutton	...	...	310	100	...	230/208	7.5/8.5	1540	...
A1076-2	15⅝	26⅛	30⅝	6¼	Steel, plastic	No	Concealed	Pushbutton	...	...	310	100	25	115	12.0	1220	...
A1076-11	15⅝	26⅛	30⅝	6¼	Steel, plastic	No	Concealed	Pushbutton	...	...	310	100	25	230	7.5	1540	...
A3072-23	18⅝	26⅝	35¼	14½	Steel, plastic	No	Exposed	Knob	...	...	540	100	...	230/208	11/12.0	2450	...
284	23⅝	33	13⅝	13⅝	Steel, plastic	Yes	Exposed	Knob	...	...	275	100	130	115	12.5	1260	...
286	23⅝	33	13⅝	13⅝	Steel, plastic	Yes	Exposed	Knob	...	...	275	100	130	115	12.5	1260	...
2102	23⅝	33	13⅝	13⅝	Steel, plastic	Yes	Exposed	Knob	...	...	285	100	130	230	8.5	1700	...
2107H	23⅝	33	13⅝	13⅝	Steel, plastic	Yes	Exposed	Knob	...	...	285	100	130	230	8.5	1700	...

*Ionitron Air Purifier (electronic air cleaner) on models A1074-2 and A1074-23. †Models 284 and 2102 have optional steam coil kit. ‡Not announced. Compact models A1072 and A1074 with no condenser side louvers and up to three times the cooling circulation.

Model No.	Heating Type	Heating Watts	Compressor Make	Compressor Hp.	Compressor Cyl.	Compressor R.p.m.	Refrigerant Type	Refrigerant Charge (oz.)	Refrigerant No.	Air Filter Type	Air Filter Dimensions	Fans Evaporator R.p.m.	Fans Evaporator Hp.	Fans Condenser R.p.m.	Fans Condenser Hp.	Coil (rows) Evap.	Coil (rows) Cond.	Net Weight	List Price
Philco—Philco Corp., Philadelphia																			
None	...	...	Tecumseh	¾	1	1725	F-22	20½	1	Disposable	9⅞x16½x½	1100	1/10	Same Motor		2	2	176	$369.95
None	...	...	Tecumseh	1	1	1725	F-22	19½	1	Disposable	9⅞x16½x½	1100	1/10	Same Motor		3	3	180	369.95
None	...	...	Tecumseh	1	2	1725	F-22	24½	1	Disposable	9⅞x16½x½	1130	1/8	Same Motor		2	3	189	389.95
None	...	...	Tecumseh	1	1	1725	F-22	20½	1	Disposable	9¼x12⅞x½	1130	1/6	Same Motor		3	5	175	299.95
None	...	...	Tecumseh	1	2	1725	F-22	20½	1	Disposable	9¼x12⅞x½	1130	1/6	Same Motor		4	6	180	319.95
None	...	...	Tecumseh	1	1	1725	F-22	20½	3	Permanent*	9¼x12⅞	1120/950	1/6	Same Motor		4	6	192	379.95
None	...	...	Tecumseh	1	2	1725	F-22	20½	3	Permanent*	9¼x12⅞	1130/950	1/6	Same Motor		4	6	197	399.95
Rev. Cycle	...	...	Tecumseh	1	1	1725	F-22	19½	1	Act. Carbon	9⅞x16½x½	1100	1/10	Same Motor		3	2	183	339.95
Rev. Cycle	...	...	Tecumseh	1	2	1725	F-22	24½	1	Act. Carbon	9⅞x16½x½	1130	1/8	Same Motor		3	3	192	‡
None	...	...	Tecumseh	3	3	1725	F-22	32	1	Permanent	10½x20½x½	1140	1/3	Same Motor		4	3	235	449.95
†	...	...	York	¾	2	1725	F-22	20	1	Disposable	10x14x½	1140	1/8	1140	1/6	3	4	180	369.95
Electric	1,200	York	¾	2	1725	F-22	20	1	Disposable	10x14x½	1140	1/8	1140	1/6	3	4	180	No list
†	...	...	York	1	2	1725	F-22	22	1	Permanent	10x14x½	1140	1/8	1140	1/6	4	6	190	399.95
Steam Coil	...	...	York	1	2	1725	F-22	22	1	Permanent	10x14x½	1140	1/8	1140	1/6	4	6	197	469.95
RCA Whirlpool—Whirlpool-Seeger Corp., St. Joseph, Mich.																			
...	...	...	Tecumseh	¾	1	1725	F-22	23.5	1	Disposable	11½x14x½	...	1/15	Same Motor		2	2	152	Open
...	...	...	Tecumseh	¾	1	1725	F-22	25	1	Disposable	11½x14x½	1080	1/10	Same Motor		2	2	152	Open
...	...	...	Tecumseh	1	2	1725	F-22	23.5	1	Disposable	11½x14x½	1110	1/8	Same Motor		2	2	165	Open
...	...	...	Tecumseh	1½	2	1725	F-22	26	1	Disposable	11½x14x½	1120	1/6	Same Motor		3	3	178	Open
...	...	...	Tecumseh	1	1	1726	F-22	19	1	Permanent	11½x14x½	...	1/8	Same Motor		2	2	160	$299.95
...	...	...	Tecumseh	1	2	1725	F-22	17	1	Permanent	11½x14x½	...	1/8	Same Motor		2	2	160	299.95
...	...	...	Tecumseh	1½	2	1725	F-22	23	1	Permanent	11½x14x½	...	1/6	Same Motor		3	3	180	399.95
...	...	...	Tecumseh	¾	1	1725	F-22	34.5	1	Permanent	11¾x14x½	...	1/15	Same Motor		2	3	171	329.95
...	...	...	Tecumseh	1	1	1725	F-22	24	1	Electronic	10½x12⅝x1½	...	1/8	Same Motor		2	3	179	349.95
...	...	...	Tecumseh	1	2	1725	F-22	23.5	1	Electronic	10½x12⅝x1½	...	1/8	Same Motor		2	3	165	349.95
...	...	...	Tecumseh	1½	2	1725	F-22	36	1	Electronic	10½x12⅝x1½	...	1/6	Same Motor		3	3	178	439.95
...	...	...	Tecumseh	½	1	1725	F-22	18	2	Permanent	7⅛x11x½	...	1/30-1/15	Same Motor		2	2	165	299.95
...	...	...	Tecumseh	¾	1	1731	F-22	21.5	2	Permanent	7⅛x11x½	...	1/20-1/15	Same Motor		2	3	185	339.95
...	...	...	Tecumseh	⅝	1	1725	F-22	25	1	Permanent	11⅛x14x½	...	1/20	Same Motor		2	2	165	369.95
...	...	...	Tecumseh	1	2	1725	F-22	21.5	1	Permanent	11⅛x14x½	...	1/20	Same Motor		2	2	190	379.95
...	...	...	Tecumseh	2	2	1725	F-22	38	1	Permanent	13⅛x15⅝x1½	...	1/12	Same Motor		4	4	230	499.95
Remington—Remington Corp., Auburn, N. Y.																			
Electric	1,200	Tecumseh	¾	1	1725	F-22	...	1	Disposable	9¼x18¾x½	1250	1/20	Same Motor		2	2	166	...
Electric	1,320	Tecumseh	¾	1	1725	F-22	...	1	Disposable	10½x20⅜x½	1050	1/20	Same Motor		2	3	185	...
Electric	1,320	Tecumseh	1	2	1725	F-22	...	1	Disposable	10½x20⅜x½	1050	1/15	Same Motor		2	3	193	...
...	...	Tecumseh	¾	1	1725	F-22	...	1	Disposable	12¾x12⅝x½	1350	1/12	Same Motor		2	2	165	...
...	...	Tecumseh	1	1	1725	F-22	...	1	Disposable	12¾x13½x½	1350	1/12	Same Motor		3	3	180	...
...	...	Tecumseh	¾	1	1725	F-22	...	1	Disposable	12x15x½	1050	1/12	Same Motor		2	4	180	...
...	...	Tecumseh	1	1	1725	F-22	...	1	Disposable	12x15x½	1050	1/6	Same Motor		3	4	175	...
...	...	Tecumseh	1	2	1725	F-22	...	1	Disposable	12x15⅝x½	1050	1/6	Same Motor		2	3½	175	...
...	...	Tecumseh	1½	2	1725	F-22	...	1	Disposable	13x14x½	1050	1/10	Same Motor		4	4	175	...
...	...	Tecumseh	2	2	1725	F-22	...	1	Disposable	13x14x½	1550	1/5	Same Motor		4	4	230	...
Uni-Trane—The Trane Co., La Crosse, Wis.																			
...	...	...	...	...	...	...	...	...	...	Perm./Disp.	8¼x15¾	1550	1/30	...	...	2	...	90	$192.50
...	...	...	...	...	...	...	...	...	...	Perm./Disp.	8¼x21¾	1550	1/25	...	...	2	...	100	210.00
...	...	...	...	...	...	...	...	...	...	Perm./Disp.	8¼x27¾	1550	1/20	...	...	2	...	115	240.00
...	...	...	...	...	...	...	...	...	...	Perm./Disp.	8¼x33¾	1550	1/12	...	...	2	...	145	280.00
Universal—Universal Major Corp., New York City																			
...	...	Tecumseh	2	...	...	F-22	...	1	Permanent	20¼x10¼x½	1050	1/4	1050	...	3	2	266	...
...	...	Tecumseh	1½	...	...	F-22	...	1	Permanent	20¾x10¼x½	1050	1/4	1050	...	2	2	262	...
Electric	1380	Tecumseh	1	...	...	F-22	...	1	Electrostatic	19¾x8x½	1050	1/8	1050	...	2	1	175	...
Electric	1380	Tecumseh	1	...	...	F-22	...	1	Electrostatic	19¾x8x½	1050	1/8	1050	...	3	1	175	...
...	...	Tecumseh	¾	...	...	F-22	...	1	Electrostatic	19¾x8x½	1050	1/8	1050	...	2	1	161	...
...	...	Tecumseh	1	...	...	F-23	...	1	Permanent	19¾x8x½	1050	1/8	1050	...	2	1	175	...
Vornado—The O. A. Sutton Corp., Wichita, Kan.																			
...	...	Tecumseh	2	2	1725	F-22	26.5	2	Disposable	7⅝x19⅝x½	1550	1/4	1550	1/4	3	3	230	$439.95
...	...	Tecumseh	½	1	1725	F-12	20.0	1	Disposable	14⅝x12⅜x½	1050	1/12	1050	1/12	2	2	145	279.95
...	...	Tecumseh	¾	1	1725	F-22	22.0	1	Disposable	14⅝x12⅜x½	1050	1/12	1050	1/12	2	3	151	329.95
...	...	Tecumseh	1	1	3600	F-12	19.1	1	Disposable	14⅝x12⅜x½	1050	1/12	1050	1/12	2	2	151	299.95
...	...	Tecumseh	1	1	1725	F-22	22.0	1	Disposable	14⅝x12⅜x½	1050	1/10	1050	1/10	2	3	151	299.95
...	...	Tecumseh	1	2	1725	F-22	21.7	1	Disposable	14⅝x12⅜x½	1050	1/10	1050	1/10	2	3	151	319.95
...	...	Tecumseh	1½	2	1725	F-22	19.8	1	Disposable	14⅝x12⅜x½	1050	1/10	1050	1/10	2	3	176	379.95
...	...	Tecumseh	¾	1	1725	F-12	18.2	1	Disposable	9⅞x17⅛x½	1050	1/30	1050	1/30	2	3	130	289.95
...	...	Tecumseh	¾	1	1725	F-22	17.0	1	Disposable	9⅞x17⅛x½	1050	1/20	1050	1/20	2	3	137	339.95
...	...	Tecumseh	1	1	1735	F-22	30.8	1	Disposable	16x11⅛x½	1530	1/8	1530	1/8	2	2	165	329.95
...	...	Tecumseh	1	2	1725	F-22	20.9	1	Disposable	16x11⅛x½	1530	1/8	1530	1/8	2	2	165	339.95
...	...	Tecumseh	1½	2	1725	F-22	22.6	1	Disposable	16x11⅛x½	1530	1/8	1530	1/8	2	3	170	399.95
Welbilt—Welbilt Corp., Maspeth, N. Y.																			
...	...	Tecumseh	2	...	...	F-22	...	1	Permanent	20¾x10¼x½	1050	1/4	1050	...	3	2	266	$439.95
...	...	Tecumseh	1½	...	...	F-22	...	1	Permanent	20¾x10¼x½	1050	1/4	1050	...	2	2	262	399.95
Electric	1,380	Tecumseh	1	...	...	F-22	...	1	Permanent	19¾x8x½	1050	1/8	1050	...	2	1	175	299.95
Electric	1,380	Tecumseh	1	...	...	F-22	...	1	Permanent	19¾x8x½	1050	1/8	1050	...	3	1	175	299.95
Electric	1,380	Tecumseh	1	...	...	F-22	...	1	Permanent	19¾x8x½	1050	1/8	1050	...	3	1	175	299.95
...	...	...	...	...	...	F-22	...	1	Permanent	19¾x8x½	1050	...	...	...	2	1	161	439.95
...	...	...	¾	...	...	F-22	...	1	Permanent	19¾x8x½	1050	1/8	1050	...	2	1	161	299.95
...	...	...	¾	...	...	F-22	...	1	Permanent	19¾x8x½	1050	1/8	...	...	2	1	161	369.95
Electric	1,380	Tecumseh	1	...	...	F-22	...	1	Permanent	19¾x8x½	1050	1/8	1050	...	2	1	175	299.95
Westinghouse—Westinghouse Electric Corp., Springfield, Mass.																			
None	...	Tecumseh	¼	1	1725	F-12	24.75	1	Disposable	7¼x23¼x½	1120	1/12	Same Motor		2	2	186	...
None	...	Tecumseh	¾	1	1725	F-22	26.5	1	Disposable	7¼x23¾x½	1120	1/12	Same Motor		2	2	190	...
None	...	Tecumseh	¾	1	1725	F-22	19.0	1	Disposable	7¼x23¾x½	1120	1/11	Same Motor		2	2	187	...
None	...	Tecumseh	1	2	1725	F-22	29.75	1	Disposable	7¼x23¾x½	1120	1/9	Same Motor		3	3	194	...
None	...	Tecumseh	1	2	1725	F-22	25.25	1	Disposable	7¼x23¾x½	1120	1/9	Same Motor		3	3	197	...
Rev. Cycle	1430	Tecumseh	1	2	1725	F-22	24.25	1	Disposable	7¼x23¾x½	1120	1/9	Same Motor		3	3	197	...
None	...	Tecumseh	¾	1	1725	F-22	24.5	1	Disposable	7¼x23¾x½	1120	1/11	Same Motor		2	2	193	...
None	...	Tecumseh	1	2	1725	F-22	29.75	1	Disposable	7¼x23¾x½	1120	1/8	Same Motor		3	3	202	...
None	...	Tecumseh	1½	2	1725	F-22	29.75	1	Disposable	7¼x23¾x½	1500	1/5	Same Motor		3	3	212	...
None	...	Tecumseh	2	2	1725	F-22	35.0	1	Disposable	7⅞x23¾x½	1440	1/5	Same Motor		3	3	240	...
Wizard—Western Auto Supply Co., Kansas City, Mo.																			
...	...	Tecumseh	¾	...	...	F-22	15.0	1	Disposable	...	...	...	...	...	3	2	160	$249.95
...	...	Tecumseh	¾	...	...	F-22	15.0	1	Disposable	...	...	...	...	...	3	2	160	299.95
...	...	Tecumseh	1	...	...	F-22	17.0	1	Disposable	...	...	...	...	...	3	2	170	279.95
...	...	Tecumseh	1	...	...	F-22	19.0	1	Disposable	...	...	...	...	...	3	2	170	319.95
...	...	Tecumseh	1	...	...	F-22	21.5	1	Disposable	...	...	...	...	...	3	4	175	339.95
...	...	Tecumseh	1½	...	...	F-22	31.4	1	Disposable	...	...	...	...	...	2	3	205	379.95
...	...	Tecumseh	1½	...	...	F-22	26.2	1	Disposable	...	...	...	...	...	3	4	180	419.95
...	...	Tecumseh	2	...	...	F-22	32.5	1	Disposable	...	...	...	...	...	2	3	235	469.95
Yorkaire—York Corp., Subsidiary of Borg-Warner Corp., York, Pa.																			
...	...	York	½	1	1725	F-22	30	1	Disposable	9⅛x16½x½	1100	1/12	Same Motor		2	1	175	$259.95
...	...	York	¾	2	1725	F-22	35	1	Disposable	9⅛x16½x½	1090	1/12	Same Motor		2	2	212	329.95
...	...	York	¾	1	1725	F-22	30	1	Permanent	9⅛x16½x½	1100	1/10	Same Motor		2	3	212	349.95
Rev. Cycle	1160	York	¾	2	1725	F-22	35	1	Permanent	9⅛x16½x½	1090	1/12	Same Motor		2	2	212	369.95
...	...	York	1	2	1725	F-22	35	1	Permanent	9⅛x16½x½	1090	1/12	Same Motor		3	3	227	349.95
...	...	York	1	2	1725	F-22	35	1	Permanent	9⅛x16½x½	1100	1/10	Same Motor		3	3	227	369.95
Rev. Cycle	1575	York	1	2	1725	F-22	35	1	Permanent	9⅛x16½x½	1090	1/8	Same Motor		3	3	227	409.95
...	...	York	1½	3	1725	F-22	36	1	Permanent	8⅝x24⅝x½	1050	1/10	1050	1/12	4	4	330	429.95
...	...	York	2	3	1725	F-22	67	1	Permanent	8⅝x24⅝x½	1500	1/4	1080	1/10	5	5	340	469.95
...	...	York	¾	2	1725	F-22	21	1	Permanent	6⅝x21⅝x½	1025/950	1/6	1025/950	1/6	3	5	200	399.95
...	...	York	1	2	1725	F-22	22.5	1	Permanent	6⅝x21⅝x½	1025/950	1/6	1025/950	1/6	3	5	200	409.95
Rev. Cycle	...	York	1	2	1725	F-22	22.5	1	Permanent	6⅝x21⅝x½	1025/950	1/6	1025/950	1/6	3	5	200	429.95

Rated under ARI standard. Special Features: Flexible air direction control; slide, rotary, or pushbutton controls; and electronic filter on Imperial models.

Rated under ARI standard. Special Features: Flexible no-draft grilles; 2-speed fan on Deluxe; eight comfort zones; thermostat.

Rated under ARI standard. Special Features: All units are equipped with thermostats.

Rated under ARI standard. 208-volt models are $10 additional.

Rated under ARI standard. Special Features: AP models have "Snorkel." Clean Air Sentry signals when filter needs changing.

Residential Air Conditioning Systems—Complete

Residential

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacities (B.t.u.h.) Cooling	Heating	Heating Type	Compressor Motor Phase	Volts	Compressor No.	Make	Hp.	Cooling Method	Type	Cylin.	Bore & Stroke (In.)	R.p.m.	Condenser Type	Cooling Medium	Evaporator Face Area (Sq. Ft.)	Rows	Refrigerant Type	Charge (Lbs.)	Factory Charged?	Control Temp.	Damper	Air Filters No.	Type	Dimensions (In.)	Blowers In Evap. Unit?	No.	Nom. C.f.m.	R.p.m.	Net Weight	Water Usage Gpm/ton
Airtemp—Airtemp Div. of Chrysler Corp., Dayton																																		
1118	24¼	36⅝	34	18,000	....	....	1	208/230	1	Tecumseh	2	Gas	Hermetic	2	1⅝x1 1/64	1750	Tube & Fin	Air	2.52	2	F-22	3.5	Yes	Yes†	No	1	Disposable	23⅜x12⅜x½	Yes	1	700	....	300*	....
1108-2	36⅝	45	50½	32,400	....	....	1	208/230	1	Tecumseh	3	Gas	Hermetic	2	2x1.2	1750	Tube & Fin	Air	3.21	3	F-22	5.05	Yes	Yes	No	1	Disposable	23⅜x12⅜x½	Yes	2	1200	....	425*	....
1202-1	33	32⅝	36	30,700	....	....	1—3	230/208/230	1	Airtemp	3	Gas	Serv. Hermetic	4	1x1 5/16	3500	Tube & Fin	Air	....	....	F-12	....	No	Yes	....	....	....	....	....	....	....	....	405	....
1218	23⅞	32⅝	36½	18,800	....	....	1—3	230	1	Tecumseh	2	Gas	Hermetic	2	1⅝x1 1/64	1750	Tube & Fin	Air	....	....	F-22	....	No	Yes	....	....	....	....	....	....	....	....	387	....
1203-1	33⅞	32⅝	36½	33,100	....	....	1—3	230/208/220	1	Airtemp	3	Gas	Serv. Hermetic	4	1x1 5/16	3500	Tube & Fin	Air	....	....	F-22	....	No	Yes	....	....	....	....	....	....	....	....	430	....
1302-1	35	35	19⅝	23,500	....	....	1—3	230/208/220	1	Airtemp	2	Gas	Serv. Hermetic	4	1x1 5/15	3500	Shell & Tube	Water	....	....	F-12	....	No	Yes	....	....	....	....	....	....	....	....	316	1.5
1303-3	35	35	19⅝	38,400	....	....	1—3	230/208/220	1	Airtemp	3	Gas	Serv. Hermetic	4	1x1 5/15	3500	Shell & Tube	Water	....	....	F-22	....	No	Yes	....	....	....	....	....	....	....	....	347	1.5
§1493-3	15½	21	24	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	3.2	3	F-12, 22	....	No	....	No	....	....	....	No	....	800/1200¶	....	40	....
1205-1	33⅝	36⅝	51⅝	50,400	....	....	1—3	230/220	1	Airtemp	5	Gas	Serv. Hermetic	5	1⅝x1⅝	1750	Tube & Fin	Air	....	....	F-12	....	No	Yes	....	....	....	....	....	....	....	....	795	....
1305-2	36½	46⅝	19⅝	62,400	....	....	1—3	230/220	1	Airtemp	5	Gas	Serv. Hermetic	5	1⅝x1⅝	1750	Shell & Tube	Water	....	....	F-12	....	No	Yes	....	....	....	....	....	....	....	....	647	1.5
§1496	17⅝	25	33⅛	....	....	....	....	....	....	....	....	....	....	....	....	....	—	....	5.33	3	F-12, 22	....	No	....	No	....	....	....	No	....	2000	....	80	....
†Remote. *Shipping weight including ducts—644, on model 1103-2, 977 lbs. ¶For 2 or 3-hp. applications. §Upflow only, horizontal and down flow also available.																																		
American Standard—Air Conditioning Div., American Radiator & Standard Sanitary Corp., New York City																																		
HCA-2	40½	25	21½	24,180	....	....	1—3	230/208/220	1	Tecumseh	2	Water	....	....	....	1750	Tube In Tube	Water	2.11	3	F-22	2# 11	Yes	Yes	Yes	....	....	....	....	....	....	....	372	....
HCA-3	40½	25	21½	36,040	....	....	1—3	230/208/220	1	Tecumseh	3	Water	....	....	....	1750	Tube In Tube	Water	2.44	4	F-22	2# 15	Yes	Yes	Yes	....	....	....	....	....	....	....	406	....
HCA-5	46½	42	23½	62,900	....	....	1—3	230/208/220	1	York	5	Water	....	....	....	1750	Shell and Coil	Water	5.93	3	F-22	6# 10	Yes	Yes	Yes	....	....	....	....	....	....	....	733	....
HCA-2H	23	23	43⅝	24,180	....	....	1—3	230/208/220	1	Tecumseh	2	Water	....	....	....	1725	Tube In Tube	Water	2.11	2	F-22	2# 11	Yes	Yes	Yes	....	....	....	....	....	....	....	395	....
HCA-3H	23	23	43⅝	36,040	....	....	1—3	230/208/220	1	Tecumseh	3	Water	....	....	....	1725	Tube In Tube	Water	2.53	3	F-22	2# 15	Yes	Yes	Yes	....	....	....	....	....	....	....	435	....
HCA-2F	66	25	27	24,000	....	....	1	230	1	Tecumseh	2	Water	....	....	....	1750	Tube In Tube	Water	2.44	2	F-22	2# 11	Yes	Yes	Yes	....	....	....	....	....	....	....	....	....
HCA-2F	57	27⅝	28⅝	25,680	....	....	3	208/220	1	Tecumseh	2	Water	....	....	....	1725	Tube In Coil	Water	2.11	3	F-22	2# 10	Yes	Yes	Yes	....	....	....	....	....	....	....	....	....
HCA-3F	57	27⅝	28⅝	36,020	....	....	1—3	230/208/220	1	Tecumseh	3	Water	....	....	....	1725	Tube In Coil	Water	2.53	4	F-22	2# 15	Yes	Yes	Yes	1	Disposable	20x25x1	Yes	....	800	....	498	....
HCA-5F	68	43	34⅝	62,900	....	....	1—3	230/208/220	1	York	5	Water	....	....	....	1750	Shell and Coil	Water	5.98	3	F-22	6# 10	Yes	Yes	Yes	1	Disposable	20x25x1	Yes	....	1200	....	521	....
HC-200	45½	34½	37⅝	28,600	....	....	1	230	2	Tecumseh	1	Water	....	3	1 9/32x⅝	1725	Coil and Fin	Water	1.17	3	F-22	1# 12	Yes	Yes	Yes	2	Disposable	20x20x1	Yes	....	2000	....	985	....
HC-300	45¾	34½	55⅝	42,900	....	....	1	230	3	Tecumseh	1	Water	....	3	1 9/32x⅝	1725	Coil and Fin	Water	1.17	3	F-22	1# 12	Yes	Yes	Yes	2	Disposable	16x20x1	....	....	....	....	435	....
C-75-G-2W	60	37½	28¼	25,000	60,000	Gas	1—3	230/208/220	1	Tecumseh	2	Water	....	....	....	1725	Tube In Tube	Water	2.11	3	F-22	2# 11	Yes	Yes	Yes	3	Disposable	16x20x1	....	....	....	....	653	....
C-100-G-2W	60	42⅝	28¼	25,000	80,000	Gas	1—3	230/208/220	1	Tecumseh	2	Water	....	....	....	1725	Tube In Tube	Water	2.11	3	F-22	2# 11	Yes	Yes	Yes	1	Disposable	16x25x1	No	....	615	....	620	....
C-125-G-2W	60	43⅝	28¼	25,000	100,000	Gas	1—3	230/208/220	1	Tecumseh	2	Water	....	....	....	1725	Tube In Tube	Water	2.11	3	F-22	2# 11	Yes	Yes	Yes	1	Disposable	20x25x1	No	....	820	....	665	....
C-150-G-2W	60	42⅝	28¼	25,000	120,000	Gas	1—3	230/208/220	1	Tecumseh	2	Water	....	....	....	1725	Tube In Tube	Water	2.11	3	F-22	2# 11	Yes	Yes	Yes	1	Disposable	20x25x1	No	....	1025	....	684	....
C-100-G-3W	60	42⅝	28¼	37,000	80,000	Gas	1—3	230/208/220	1	Tecumseh	3	Water	....	....	....	1725	Tube In Tube	Water	2.53	4	F-22	2# 15	Yes	Yes	Yes	2	Disposable	15x20x1	No	....	1230	....	703	....
C-125-G-3W	60	42⅝	28¼	37,000	100,000	Gas	1—3	230/208/220	1	Tecumseh	3	Water	....	....	....	1725	Tube In Tube	Water	2.53	4	F-22	2# 15	Yes	Yes	Yes	1	Disposable	20x25x1	No	....	820	....	687	....
C-150-G-3W	60	43⅝	28¼	37,000	120,000	Gas	1—3	230/208/220	1	Tecumseh	3	Water	....	....	....	1725	Tube In Tube	Water	2.53	4	F-22	2# 15	Yes	Yes	Yes	1	Disposable	20x25x1	No	....	1025	....	706	....
C-85-OB-2W	55	46⅝	28¼	25,000	85,000	Oil	1—3	230/208/220	1	Tecumseh	2	Water	....	....	....	1725	Tube In Tube	Water	2.11	3	F-22	2# 11	Yes	Yes	Yes	2	Disposable	15x20x1	No	....	1230	....	725	....
C-112-OB-2W	57½	46⅝	28¼	25,000	112,000	Oil	1—3	230/208/220	1	Tecumseh	2	Water	....	....	....	1725	Tube In Tube	Water	2.11	3	F-22	2# 11	Yes	Yes	Yes	1	Disposable	20x25x1	No	....	865	....	861	....
C-85-OB-3W	55	46⅝	28¼	37,000	85,000	Oil	1—3	230/208/220	1	Tecumseh	3	Water	....	....	....	1725	Tube In Tube	Water	2.53	4	F-22	2# 15	Yes	Yes	Yes	2	Disposable	15x20x1	No	....	1140	....	876	....
C-112-OB-3W	57½	46⅝	28¼	37,000	112,000	Oil	1—3	230/208/220	1	Tecumseh	3	Water	....	....	....	1725	Tube In Tube	Water	2.53	4	F-22	2# 15	Yes	Yes	Yes	1	Disposable	20x25x1	No	....	865	....	883	....
ACP-20	30⅝	29⅝	39⅝	22,000	....	....	....	....	1	Tecumse	(2) 1	Water	....	....	....	....	Tube In Tube	Water	1.9	3	F-22	3# 13	Yes	Yes	Yes	2	Disposable	15x20x1	No	....	1140	....	898	....
ACP-35	34½	36⅛	47⅝	36,000	....	....	....	....	1	Tecumseh	(2) 1⅝	Water	....	....	....	....	Tube In Tube	Water	2.7	4	F-22	5# 6	Yes	Yes	Yes	....	....	....	Yes	....	810	1120	....	....
AC-2A	29	31⅛	29⅛	21,600	....	....	1—3	230/208/220	1	Tecumseh	2	Air	....	....	....	1725	Coil and Fin	Air	....	....	F-22	....	....	Yes	No	....	....	....	Yes	....	1505	1120	....	....
§RC-2V	16⅝	17	17⅝	22,000	....	....	....	....	....	....	....	....	....	....	....	....	....	Air	1.19	3	F-22	6# 12	Yes	....	....	....	....	....	....	....	....	....	345	....
AC-3A	29	31½	29⅛	32,500	....	....	1—3	230/208/220	1	Tecumseh	3	Air	....	....	....	1725	Coil and Fin	Air	....	....	F-22	....	....	Yes	No	....	....	....	....	....	....	....	365	....
§RC-3V	16⅝	24⅝	20⅝	34,340	....	....	....	....	....	....	....	....	....	....	....	....	....	Air	1.41	4	F-22	7# 15	Yes	....	....	....	....	....	....	....	....	....	89	....
AC-5A	33⅝	37	37	60,000	....	....	1—3	230/208/220	1	York	5	Air	....	....	....	1725	Coil and Fin	Air	....	....	F-22	....	....	Yes	No	....	....	....	....	....	....	....	508	....
*RC-5B	24	28⅝	40¼	60,000	....	....	....	....	....	....	....	....	....	....	....	....	—	Air	4.16	4	F-22	14	Yes	....	....	2	Disposable	20x20x1	Yes	1	2000	....	....	....
§Upflow only. Also available in horizontal flow. * Horizontal flow only. "C" models also available air cooled.																																		
Bard—Bard Mfg. Co., Bryan, Ohio																																		
F95AC21	63⅝	25	52	22,500	95,000	Oil	1	230	1	Tecumseh	2	Suction	Hermetic	2	1⅝x1.2	1725	Finned Coil	Air	2.04	4	F-22	6	Yes	Yes	No	1	Disposable	20x25x1	No	....	....	....	910	....
F95AC31	63⅝	25	52	35,300	95,000	Oil	1	230	1	Tecumseh	3	Suction	Hermetic	2	2x1.2	1725	Finned Coil	Air	2.92	4	F-22	6	Yes	Yes	No	1	Disposable	20x25x1	No	....	....	....	945	....
G110AC21	63⅝	25	52	22,500	88,000	Gas	1	230	1	Tecumseh	2	Suction	Hermetic	2	1⅝x1.2	1725	Finned Coil	Air	2.04	4	F-22	6	Yes	Yes	No	1	Disposable	20x25x1	No	....	....	....	900	....
G110AC31	63⅝	25	52	35,300	88,000	Gas	1	230	1	Tecumseh	3	Suction	Hermetic	2	2x1.2	1725	Finned Coil	Air	2.92	4	F-22	6	Yes	Yes	No	1	Disposable	20x25x1	No	....	....	....	935	....
F95AF201	63⅝	25	52	28,350	95,000	Oil	1	230	1	Copeland	2	Suction	Copelametic	2	1 15/16x1⅝	1725	Evap. Cond.	Water	2.13	3	F-12	12	No	Yes	No	1	Disposable	20x25x1	No	....	....	....	1000	....
F95AF301	63⅝	25	52	42,525	95,000	Oil	1	230	1	Copeland	3	Suction	Copelametic	2	2¼x1 7/16	1725	Evap. Cond.	Water	2.38	4	F-12	16	No	Yes	No	1	Disposable	20x25x1	No	....	....	....	1190	....
G110AF201	63⅝	25	52	28,350	88,000	Gas	1	230	1	Copeland	2	Suction	Copelametic	2	1 15/16x1⅝	1725	Evap. Cond.	Water	2.13	3	F-12	12	No	Yes	No	1	Disposable	20x25x1	No	....	....	....	990	....
G110AF301	63⅝	25	52	42,525	88,000	Gas	1	230	1	Copeland	3	Suction	Copelametic	2	2¼x1 7/16	1725	Evap. Cond.	Water	2.38	4	F-12	16	No	Yes	No	1	Disposable	20x25x1	No	....	....	....	1190	....
All models upflow only.																																		
Berger—Berger Furnace Corp., Belle Vernon, Pa.																																		
§BAC211	24	36	44⅝	17,900	....	....	1	230	1	Tecumseh	1⅝	Gas	Hermetic	2	1⅝x1 1/64	....	Fin-Tube	Air	2.33	4	F-22	6	Yes	Yes	No	....	None	....	No	....	....	....	483	....
§BAC221-3	24	36	44⅝	22,500	....	....	1—3	230	1	Tecumseh	2	Gas	Hermetic	2	1⅝x1.2	....	Fin-Tube	Air	2.33	4	F-22	6	Yes	Yes	No	....	None	....	No	....	....	....	483	....
§BAC231-3	24	36	44⅝	35,300	....	....	1—3	230	1	Tecumseh	3	Gas	Hermetic	2	2x1.2	....	Fin-Tube	Air	2.91	4	F-22	6	Yes	Yes	No	....	None	....	No	....	....	....	513	....
§BAC251-3	24	36	44⅝	60,000	....	....	1—3	230	1	Tecumseh	5	Gas	Hermetic	4	1⅝x1 7/16	....	Fin-Tube	Air	4.32	4	F-22	10	Yes	Yes	No	....	None	....	No	....	....	....	636	....
§Upflow only. Also available in horizontal or down flow.																																		
Bonair—Bonair Products, Inc., Darby, Pa.																																		
T200AC	12	24	24	20,700	....	....	1	230	1	Tecumseh	1⅝	Gas	Hermetic	....	....	....	Fin & Tube	Air	....	3	F-22	....	No	No	Opt.	....	....	....	No	....	....	....	....	....
200AC	13	23	24	22,500	....	....	1	230	1	Tecumseh	2	Gas	Hermetic	....	....	....	Fin & Tube	Air	....	3	F-22	....	No	No	Opt.	....	....	....	No	....	....	....	....	....
300AC	13	23	24	33,800	....	....	1	230	1	Tecumseh	3	Gas	Hermetic	....	....	....	Fin & Tube	Air	....	4	F-22	....	No	No	Opt.	....	....	....	No	....	....	....	....	....
500AC	19	38	18	60,000	....	....	1	230	1	Tecumseh	5	Gas	Hermetic	....	....	....	Fin & Tube	Air	....	4	F-22	....	No	No	Opt.	....	....	....	No	....	....	....	....	....
200WC	40½	24¼	21⅝	26,800	....	....	1	230	1	Tecumseh	2	Gas	Hermetic	....	....	....	Fin & Tube	Water	....	3	F-22	2# 11	No	No	Opt.	....	....	....	Opt.	....	800	....	....	1⅝
300WC	40½	24¼	21⅝	36,900	....	....	1	230	1	Tecumseh	3	Gas	Hermetic	....	....	....	Fin & Tube	Water	....	4	F-22	2# 15	No	No	Opt.	....	....	....	Opt.	....	1200	....	....	1⅝
500WC	40½	24¼	39¼	63,700	....	....	1	230	1	Tecumseh	5	Gas	Hermetic	....	....	....	Fin & Tube	Water	....	4	F-22	4# 7	No	No	Opt.	....	....	....	Opt.	....	2000	....	....	1⅝
Bryant—Bryant Mfg. Co., Tyler, Texas																																		
200-556	20⅝	29⅝	29	19,000	....	....	1	230	1	Tecumseh	1⅝	Refrig.	Hermetic	2	1⅝x1 1/64	1725	Fin & Tube	Air	2.00	2	R-22	....	Yes	Yes	No	1	Disposable	20x20	Yes	1	....	....	282	....
30-556	22⅝	45⅝	36⅛	33,500	....	....	1	230	1	Tecumseh	3	Refrig.	Hermetic	2	2x1.2	1725	Fin & Tube	Air	2.63	4	R-22	5⅝	Yes	Yes	No	1	Permanent	13x33	Yes	1	....	....	400	....
25-577	72	34⅝	29	23,200	80,000	....	1	230	1	Tecumseh	2	Refrig.	Hermetic	2	1⅝x1.2	1725	Fin & Tube	Air	3.75	2	R-22	4⅛	Yes	Yes	No	1	Disposable	16x25	Yes	1	....	....	600	....
20-560	21	35⅛	30½	21,000	....	....	1—3	230/220	1	Bryant	2	Refrig.	Hermetic	2	2x1⅛	1725	Fin & Tube	Air	....	....	R-12	14	Yes	Yes	No	....	....	....	....	....	....	....	....	....
§20A	16⅛	20⅛	20	21,000	....	....	....	....	....	....	....	....	....	....	....	....	—	....	2.92	2	R-12	....	....	Yes	No	....	....	....	....	....	....	....	....	....
20VB	22⅝	23⅛	23⅛	21,000	....	....	....	....	....	....	....	....	....	....	....	....	—	....	2.48	3	R-12	....	....	Yes	No	1	Disposable	20x20	Yes	1	....	....	156	....
30-560	21	35⅛	30⅛	32,000	....	....	1—3	230/220	1	Bryant	3	Refrig.	Hermetic	2	2x1.366	1725	Fin & Tube	Air	....	....	....	16	Yes	Yes	No	....	....	....	....	....	....	....	....	....
§30A	16⅛	20⅛	20	32,000	....	....	....	....	....	....	....	....	....	....	....	....	—	....	2.92	3	....	....	....	Yes	No	....	....	....	....	....	....	....	....	....
30VB	23⅛	23⅛	23⅛	32,000	....	....	....	....	....	....	....	....	....	....	....	....	—	....	2.48	4	....	....	....	Yes	No	1	Disposable	20x20	Yes	1	....	....	163	....
40-560	26	45⅝	36½	42,000	....	....	1—3	230/220	1	Bryant	5	Refrig.	Hermetic	4	2x1⅛	1725	Fin & Tube	Air	....	....	R-12	19½	Yes	Yes	No	....	....	....	....	....	....	....	....	....
§40A	16⅛	27⅛	20	42,000	....	....	....	....	....	....	....	....	....	....	....	....	—	....	3.90	3	R-12	....	....	Yes	No	....	....	....	....	....	....	....	....	....
40VB	28⅛	28⅛	28⅛	42,000	....	....	....	....	....	....	....	....	....	....	....	....	—	....	3.58	3	R-12	....	....	Yes	No	2	Disposable	16x20	Yes	1	....	....	215	....
50-560	26	45⅝	36½	54,000	....	....	1—3	230/220	1	Bryant	5	Refrig.	Hermetic	4	2x1 7/16	1725	Fin & Tube	Air	....	....	....	19	Yes	Yes	No	....	....	....	....	....	....	....	....	....
§50A	16⅛	31⅛	20	54,000	....	....	....	....	....	....	....	....	....	....	....	....	—	....	4.86	3	....	....	....	Yes	No	....	....	....	....	....	....	....	....	....
50VB	28⅛	28⅛	28⅛	54,000	....	....	....	....	....	....	....	....	....	....	....	....	—	....	3.88	4	....	....	....	Yes	No	2	Disposable	16x20	Yes	1	....	....	218	....
60-560	27½	47⅛	36½	63,000	....	....	3	230	1	Bryant	7½	Refrig.	Hermetic	4	2x1 7/16	1725	Fin & Tube	Air	....	....	....	21	Yes	Yes	No	....	....	....	....	....	....	....	....	....
60VB	36⅛	28⅛	28⅛	63,000	....	....	....	....	....	....	....	....	....	....	....	....	....	....	4.46	4	....	....	....	Yes	No	....	Permanent	25x25	Yes	1	....	....	270	....
2-590	63	25	28	24,000	....	....	1—3	230/220	1	Bryant	2	Refrig.	Hermetic	2	2x1.366	1725	Shell & Coil	Water	1.76	4	R-12	5½	Yes	Yes	Yes	....	Disposable	14x25	Yes	1	....	....	490	1½
3-590	63	27	28	36,000	....	....	1—3	230/220	1	Bryant	3	Refrig.	Hermetic	2	2x1⅛	1725	Shell & Coil	Water	2.62	4	R-22	6½	Yes	Yes	Yes	....	Disposable	20x25	Yes	1	....	....	550	1½
5-590	68	33	28	60,000	....	....	1—3	230/220	1	Bryant	5	Refrig.	Hermetic	4	1 13/16x1⅛	1725	Shell & Coil	Water	4.37	4	R-22	9	Yes	Yes	Yes	2	Disposable	16x25	Yes	1	....	....	900	1½
§Upflow only. VB models for universal application. Also available in two styles of horizontal flow.																																		
Capitolaire—National-U. S. Radiator Corp., Johnstown, Pa.																																		
IAR-201	25⅛	58⅝	25⅛	24,000	....	....	1	230	1	Tecumseh	2	Gas	Hermetic	2	....	1725	—	Air/Water	....	....	R-22	6.5/4.5	Yes	Yes	Yes	....	....	....	....	....	....	....	730/375	1.5
§Evap. Sect.	17	21	21	....	....	....	....	....	....	....	....	....	....	....	....	....	—	—	2.25	3	....	....	....	....	....	....	Permanent	18x18x1	Yes	1	900	1725	....	....
IAR-031	25⅛	58⅝	25⅛	36,000	....	....	1	230	1	Tecumseh	3	Gas	Hermetic	2	....	1725	—	Air/Water	....	....	R-22	7.5/5.5	Yes	Yes	Yes	....	....	....	....	....	....	....	820/395	1.5
§Evap. Sect.	17⅛	21⅛	21⅛	....	....	....	....	....	....	....	....	....	....	....	....	....	—	—	2.25	4	....	....	....	....	....	....	Permanent	18x18x1	Yes	1	1350	1725	....	....
IAR-051	30⅛	64⅛	30⅛	60,000	....	....	1	230	1	Tecumseh	5	Gas	Hermetic	4	....	1725	—	Air/Water	....	....	R-22	10/8.5	Yes	Yes	Yes	....	....	....	....	....	....	....	940/545	1.5
§Evap. Sect.	19	25	25	....	....	....	....	....	....	....	....	....	....	....	....	....	—	—	3.5	5/6	....	....	....	....	....	....	Permanent	22x22x1	Yes	1	2000/2400	1725	....	....
Century—Century Engineering Co., Cedar Rapids, Iowa																																		
A200	21	29½	40½	22,000	....	....	1	230	2	....	(2) 1	Gas	Hermetic	....	....	....	Fin & Tube	Air	....	....	F-22	....	....	Yes	....	....	....	....	Yes	1	760*	....	343	....
A350	24½	36½	48⅝	36,000	....	....	1	230	2	....	(2) 1⅝	Gas	Hermetic	....	....	....	Fin & Tube	Air	....	....	F-22	....	....	Yes	....	....	....	....	Yes	1	1443*	....	508	....
BA2K	36⅝	44½	32	25,500	....	....	1—3	230/220	1	Tecumseh	2	Gas	Hermetic	....	....	....	Fin & Tube	Air	....	....	F-22	Holding	....	....	....	....	....	....	....	....	....	....	....	....
BW2K	21½	21⅛	21⅝	28,000	....	....	1—3	230/220	1	Tecumseh	2	Gas	Hermetic	....	....	....	Co-axial	Water	....	....	F-22	Holding	....	....	....	....	....	....	....	....	....	....	....	3.2
§Evap.	24	26⅛	29⅝	....	....	....	....	....	....	....	....	....	....	....	....	....	—	....	....	2	....	....	....	....	....	....	....	....	No	....	800	....	....	....
BA3K	26⅝	44½	32	38,500	....	....	1—3	230/220	1	Tecumseh	3	Gas	Hermetic	....	....	....	Fin & Tube	Air	....	....	F-22	Holding	....	....	....	....	....	....	....	....	....	....	....	....
BW3K	21	21⅛	21⅝	42,000	....	....	1—3	230/220	1	Tecumseh	3	Gas	Hermetic	....	....	....	Co-axial	Water	....	....	F-22	Holding	....	....	....	....	....	....	....	....	....	....	....	....
§Evap.	24	36⅝	29⅝	....	....	....	....	....	....	....	....	....	....	....	....	....	—	....	....	3	....	....	....	....	....	....	....	....	No	....	1200	....	....	4.9
§Upflow only. *At 30 static pressure.																																		
Cool-Ette—Cool-Ette, Inc., Detroit																																		
RV2W	40½	25	21½	24,700	....	....	1—3	220	1	Tecumseh	2	....	Hermetic	2	....	1725	—	Water*	1.75	4	F-22	2# 11†	....	....	....	1	Permanent	20x20x1	....	....	....	....	....	....
RV3W	40½	25	21½	36,650	....	....	1—3	220	1	Tecumseh	3	....	Hermetic	2	....	1725	—	Water	2.91	4	F-22	2# 11	....	....	....	1	Permanent	20x20x1	....	....	....	....	....	....
RV5W	66½	25	25	65,800	....	....	1—3	220	1	Tecumseh	5	....	Hermetic	4	....	1725	—	Water	4.19	4	F-22	5# 4	....	....	....	2	Permanent	16x25x1	....	....	....	....	....	....
F2W	57½	25	21½	....	....	....	1—3	220	1	Tecumseh	2	....	Hermetic	2	1⅝x1.2	1725	—	Water	1.75	4	F-22	2# 11	....	....	....	1	Permanent	20x20x1	....	1	800	....	450‡	....
F3W	57½	25	21½	....	....	....	1—3	220	1	Tecumseh	3	....	Hermetic	3	2x1.2	1725	—	Water	2.91	4	F-22	2# 11	....	....	....	1	Permanent	20x20x1	....	1	1200	....	510‡	....
F5W	66½	35	25	....	....	....	1—3	220	1	Tecumseh	5	....	Hermetic	4	1⅝x1 7/16	1725	—	Water	4.19	4	F-22	5# 4	....	....	....	2	Permanent	16x25x1	....	1	2000	....	790	....
WC2W	37	23¼	17⅝	25,300	30,000	....	1—3	220	1	Tecumseh	2	....	Hermetic	....	....	....	—	Water	1.75	4	F-22	2# 11	....	....	....	1	Permanent	20x20x1	....	....	....	....	....	....
WC3W	37	23¼	17⅝	37,000	45,000	....	1—3	220	1	Tecumseh	3	....	Hermetic	....	....	....	—	Water	2.91	4	F-22	2# 11	....	....	....	1	Permanent	20x20x1	....	....	....	....	....	....
WC5W	40	22	20	65,000	75,000	....	1—3	220	1	Tecumseh	5	....	Hermetic	....	....	....	—	Water	4.19	4	F-22	5# 4	....	....	....	2	Permanent	20x20x1	....	....	....	....	....	....

*All 2 and 3-hp. models also available air cooled at slightly less capacity in "R" series. †Holding charge in air-cooled models. 800 lbs. for air-cooled models. "R" series also available in horizontal cabinets 21x23⅝x41⅞ in.

Residential

Coleman—The Coleman Co., Inc., Wichita, Kan.

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacities (B.t.u.h.) Cooling	Heating	Heating Type	Compressor Motor Phase	Volts	Compressor No.	Make	Hp.	Cooling Method	Type	Cylin.	Bore & Stroke (In.)	R.p.m.
*6212	21	30	46	23,400	...	...	1	230	2	Tecumseh	(2) 1	Refrig.	Hermetic	2	...	1725
*6213	21	34¼	55	36,000	...	...	1	230	2	Tecumseh	(2) 1½	Refrig.	Hermetic	2	...	1725
6216	23¼	24	26½	18,000	...	...	1	230	1	Tecumseh	1½	Refrig.	Hermetic	2	...	...
6217	27½	31¾	31¾	31,500	...	...	1—3	230	1	Tecumseh	3	Refrig.	Hermetic	2	...	...
6218	36½	36½	36½	57,000	...	...	1—3	230	1	Tecumseh	5	Refrig.	Hermetic	4	...	...
6016	50½	29	51½	20,000	...	...	1	230	1	Tecumseh	1½	Refrig.	Hermetic	2	...	1725
6017	50½	29	51½	36,000	...	...	1—3	230	1	Tecumseh	3	Refrig.	Hermetic	2	...	1725
6018	50½	29	57½	62,500	...	...	1—3	230	1	Tecumseh	5	Refrig.	Hermetic	4	...	1725
§6501	60	16	28	12,000	...	...	...	...	...	...	...	...	...	...	...	...
§6502	60	16	28	24,000	...	...	...	...	...	...	...	...	...	...	...	...
§6503	60	20	30	36,000	...	...	...	...	...	...	...	...	...	...	...	...
§6505	60	23¾	37	60,000	...	...	...	...	...	...	...	...	...	...	...	...

*Horizontal only. §Upflow models.

Model No.	Condenser Type	Cooling Medium	Evaporator Face Area (Sq. Ft.)	Rows	Refrigerant Type	Charge (Lbs.)	Factory Charged?	Control Temp.	Damper	Air Filters No.	Type	Dimensions (In.)	Blowers In Evap. Unit?	No.	Nom. C.f.m.	R.p.m.	Net Weight	Water Usage Gpm/ton
*6212	...	Air	1.9	3	F-22	3	Yes	No	No	1	Disposable	14x25x1	Yes	1	800	1140	325	...
*6213	...	Air	2.5	4	F-22	5	Yes	No	No	1	Disposable	20x25x1	Yes	1	1200	1140	450	...
6216	...	Air	...	...	F-22	Hold	Yes	No	No	...	...	...	...	...	...	...	195	...
6217	...	Air	...	...	F-22	Hold	Yes	No	No	...	...	...	...	...	...	...	300	...
6218	...	Air	...	...	F-22	Hold	Yes	No	No	...	...	...	...	...	...	...	450	...
6016	...	Air & Water	...	...	F-22	Hold	Yes	No	No	...	...	...	...	...	...	...	428	.05
6017	...	Air & Water	...	...	F-22	Hold	Yes	No	No	...	...	...	...	...	...	...	587	.05
6018	...	Air & Water	...	...	F-22	Hold	Yes	No	No	...	...	...	...	...	...	...	650	.05
§6501	...	...	1.02	3	F-12, 22	...	No	No	No	2	Disposable	20x10x1	Yes	1	400	...	185	...
§6502	...	...	2.19	3	F-12, 22	...	No	No	No	2	Disposable	20x10x1	Yes	1	750	...	190	...
§6503	...	...	2.88	4	F-12, 22	...	No	No	No	1	Disposable	20x25x1	Yes	1	1200	...	220	...
§6505	...	...	4.16	4	F-12, 22	...	No	No	No	2	Disposable	20x16x1	Yes	1	1950	...	280	...

Curtis—Refrigeration Div., Curtis Mfg. Co., St. Louis

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacities (B.t.u.h.) Cooling	Heating	Heating Type	Compressor Motor Phase	Volts	Compressor No.	Make	Hp.	Cooling Method	Type	Cylin.	Bore & Stroke (In.)	R.p.m.
AV-400	29	29	38	31,300	...	...	1—3	230/208/220	1	Tecumseh	3	Refrig.	Hermetic	2	2x1.2	1750
§V-3	15	17¾	21½	36,000	...	...	...	...	...	...	...	...	...	...	...	...
*CM24	19¼	37¾	36	39,000	117,000	...	...	...	...	...	...	...	...	...	...	...
AU-600	29	31	44	50,900	...	...	1—3	230/208/220	1	Tecumseh	5	Refrig.	Hermetic	4	1¾x1 7/16	1750
§V-5	17⅝	22½	29	60,000	...	...	...	...	...	...	...	...	...	...	...	...
*CM400	22	44¾	36	65,000	187,000	...	3	208/220/440/550	...	...	...	...	...	...	...	...
AU-800	36	46	52	84,200	...	...	...	...	1	Copeland	7½	Refrig.	Semi-Hermetic	2	2 7/16x1 13/16	1750
HRE-75	24¼	54	9⅛	86,500	...	...	...	...	...	...	...	...	...	...	...	...

§Upflow only. Also available in horizontal and downflow. *Horizontal flow only.

Model No.	Condenser Type	Cooling Medium	Evaporator Face Area (Sq. Ft.)	Rows	Refrigerant Type	Charge (Lbs.)	Factory Charged?	Control Temp.	Damper	Air Filters No.	Type	Dimensions (In.)	Blowers In Evap. Unit?	No.	Nom. C.f.m.	R.p.m.	Net Weight	Water Usage Gpm/ton
AV-400	Fin-Coil	Air	...	...	F-22	...	No	Opt.	...	...	...	...	...	...	...	...	...	...
§V-3	...	...	2.63	...	F-22	...	No	...	...	...	...	...	...	...	...	...	...	...
*CM24	...	...	2.40	...	F-22	...	No	...	...	1	Disposable	16x25x1	Yes	2	1200	...	175	...
AU-600	Fin-Coil	Air	...	...	F-22	...	No	Opt.	...	...	...	...	...	...	...	...	...	...
§V-5	...	...	4.2	...	F-22	...	No	...	...	...	...	...	...	...	...	...	...	...
*CM400	...	...	4.0	...	F-22	...	No	...	...	2	Disposable	16x20x1	Yes	2	2000	...	270	...
AU-800	Fin-Coil	Air	...	...	F-22	...	No	Opt.	...	...	...	...	...	...	...	...	...	...
HRE-75	...	...	5.35	...	F-22	...	No	...	...	...	...	...	...	...	...	...	...	...

Day & Night—Day & Night Mfg. Co., Monrovia, Calif.

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacities (B.t.u.h.) Cooling	Heating	Heating Type	Compressor Motor Phase	Volts	Compressor No.	Make	Hp.	Cooling Method	Type	Cylin.	Bore & Stroke (In.)	R.p.m.
220AC	20¾	32	39⅝	22,000	...	...	1	220	2	Tecumseh	2	Gas	Hermetic	2	...	1725
175T-ACR	24	24	26½	20,500	...	...	1	220	1	Tecumseh	2	Gas	Hermetic	2	...	1725
§175T-ACR-U	13	14	22	20,500	80,000	Gas	...	...	...	...	...	...	...	...	...	...
ACR-4A	26⅝	32⅛	35⅝	30,000	100,000	Gas	1—3	208/220	1	Own	...	Gas	Semi-Hermetic	2	...	1725
ACR-4A-UD	17	20	22⅛	30,000	100,000	Gas	...	...	...	...	...	...	...	...	...	...
ACR-4A-FC	24½	30¼	26⅛	30,000	...	Gas	...	...	...	...	...	...	...	...	...	...
ACR-6A	26⅝	36	43	39,200	135,000	Gas	1—3	208/220	1	Own	...	Gas	Semi-Hermetic	4	...	1725
ACR-6A-UD	19⅝	26⅝	22⅞	39,200	135,000	Gas	...	...	...	...	...	...	...	...	...	...
ACR-6A-FC	26¼	40⅞	28⅛	39,200	...	Gas	...	...	...	...	...	...	...	...	...	...
ACR-7A	26⅝	38	48½	49,650	170,000	Gas	1—3	208/220	1	Own	...	Gas	Semi-Hermetic	4	...	1725
ACR-7A-UD	22⅛	30⅛	22⅞	49,650	170,000	Gas	...	...	...	...	...	...	...	...	...	...
ACR-7A-FC	28¼	46¾	30⅛	49,650	...	...	...	...	...	...	...	...	...	...	...	...
ACR-8A	31½	60	46½	75,000	...	...	3	220	1	Own	...	Gas	Semi-Hermetic	6	...	1725
ACR-8A-FC	28½	42	40	75,000	...	...	...	...	...	...	...	...	...	...	...	...

§Down flow only. UD models upflow and down flow. FC models fan-coil units. Horizontal flow models also available

Model No.	Condenser Type	Cooling Medium	Evaporator Face Area (Sq. Ft.)	Rows	Refrigerant Type	Charge (Lbs.)	Factory Charged?	Control Temp.	Damper	Air Filters No.	Type	Dimensions (In.)	Blowers In Evap. Unit?	No.	Nom. C.f.m.	R.p.m.	Net Weight	Water Usage Gpm/ton
220AC	...	Air	1.9	3	F-22	3	Yes	Yes	No	1	Disposable	12x24	Yes	1	900	1725	400	...
175T-ACR	...	Air	...	...	F-22	2¾	No	Yes	No	...	...	...	...	...	...	...	230	...
§175T-ACR-U	...	...	2.22	3	F-22	...	No	...	...	...	...	...	No	1	700	...	35	...
ACR-4A	...	Air	...	...	C-7	10½	Yes	Yes	No	...	...	...	...	...	...	...	430	...
ACR-4A-UD	...	...	2.66	3	C-7	...	...	...	...	...	...	...	No	1	1000	...	45	...
ACR-4A-FC	...	...	2.95	2	C-7	...	...	...	...	1	Disposable	25x20x1	Yes	1	1000	1725	125	...
ACR-6A	...	Air	...	...	F-12	15¼	Yes	Yes	No	...	...	...	...	...	...	...	530	...
ACR-6A-UD	...	...	3.65	3	F-12	...	...	...	...	...	...	...	No	1	1300	...	75	...
ACR-6A-FC	...	...	4.35	2	F-12	...	...	...	...	2	Disposable	16x20x1	Yes	1	1300	1725	200	...
ACR-7A	...	Air	...	...	C-7	18	Yes	Yes	No	...	...	...	...	...	...	...	585	...
ACR-7A-UD	...	...	4.50	3	C-7	...	...	...	...	...	...	...	No	1	1800	...	100	...
ACR-7A-FC	...	...	5.30	2	C-7	...	...	...	...	2	Disposable	20x25x1	Yes	1	1800	1725	250	...
ACR-8A	...	Air	...	...	...	29	Yes	Yes	No	...	...	...	...	...	...	...	900	...
ACR-8A-FC	...	...	5.0	4	C-7	...	...	...	...	2	Disposable	16x25x1	Yes	1	2500	1725	251	...

Deering—Deering Air Conditioning Co., Cincinnati

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacities (B.t.u.h.) Cooling	Heating	Heating Type	Compressor Motor Phase	Volts	Compressor No.	Make	Hp.	Cooling Method	Type	Cylin.	Bore & Stroke (In.)	R.p.m.
*H2A31	21	36	24	19,000	...	...	1	230	1	Tecumseh	1¾	Gas	Hermetic	2	1.5x1 1/64	...
*H3A31	21	36	24	34,000	...	...	1	230	1	Tecumseh	3	Gas	Hermetic	2	2x1.2	...
§3GW31	68	36	24	36,000	96,000†	Gas	1	230	1	Tecumseh	3	Gas	Hermetic	2	2x1.2	...
§3OW31	68	36	24	36,000	105,000†	Oil	1	230	1	Tecumseh	3	Gas	Hermetic	2	2x1.2	...
§5GW33	78	36	24	60,000	112,000†	Gas	3	230	1	Tecumseh	5	Gas	Hermetic	2	...	...
§5OW33	78	36	24	60,000	120,000†	Oil	3	230	1	Tecumseh	5	Gas	Hermetic	2	...	...
DA02	16½	...	34	21,500	...	...	...	...	1	Tecumseh	2	Gas	Hermetic	2	...	...
DA03	16	16¼	38	33,000	...	...	...	...	1	Tecumseh	3	Gas	Hermetic	2	...	...

*Horizontal flow only. §Upflow. Also supplies hot water. (Tri-Pak) Also available air-cooled at slightly less capacity. †Input. DA models available for upflow or down flow.

Model No.	Condenser Type	Cooling Medium	Evaporator Face Area (Sq. Ft.)	Rows	Refrigerant Type	Charge (Lbs.)	Factory Charged?	Control Temp.	Damper	Air Filters No.	Type	Dimensions (In.)	Blowers In Evap. Unit?	No.	Nom. C.f.m.	R.p.m.	Net Weight	Water Usage Gpm/ton
*H2A31	Fin & Tube	Air	1.7	4	F-22	2.2	Yes	...	...	...	...	...	...	...	800	...	255	...
*H3A31	Fin & Tube	Air	2.6	4	F-22	3.2	Yes	...	...	...	...	...	...	...	1200	...	275	...
§3GW31	Tube In Tube	Water	2.7	3	F-22	Holding	Yes	...	...	...	...	...	...	...	1200	...	700	...
§3OW31	Tube In Tube	Water	2.7	3	F-22	Holding	Yes	...	...	...	...	...	...	...	1200	...	680	...
§5GW33	Tube In Tube	Water	5.0	3	F-22	Holding	Yes	...	...	...	...	...	...	...	1800	...	800	...
§5OW33	Tube In Tube	Water	5.0	3	F-22	Holding	Yes	...	...	...	...	...	...	...	1800	...	780	...
DA02	Fin & Tube	Air	2.4	3	F-22	Holding	Yes	...	...	...	...	...	...	...	800	...	...	...
DA03	Fin & Tube	Air	3.02	3	F-22	Holding	Yes	...	...	...	...	...	...	...	1200	...	...	...

Delco—Delco Appliance Div., General Motors Corp., Rochester, N. Y.

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacities (B.t.u.h.) Cooling	Heating	Heating Type	Compressor Motor Phase	Volts	Compressor No.	Make	Hp.	Cooling Method	Type	Cylin.	Bore & Stroke (In.)	R.p.m.
§P-AU2	14*	18½	22	21,000	...	...	1—3	230/208/220	1	Tecumseh	1¾	Air	Hermetic	2	1⅝x1 1/64	1720
§P-AU3	18*	22	22	33,800	...	...	1—3	230/208/220	1	Tecumseh	3	Air	Hermetic	2	2x1⅛	1720
§P-AU5	23*	29½	22	60,000	...	...	1—3	230/208/220	1	Tecumseh	5	Air	Hermetic	4	1¾x1 1/16	1720

Model No.	Condenser Type	Cooling Medium	Evaporator Face Area (Sq. Ft.)	Rows	Refrigerant Type	Charge (Lbs.)	Factory Charged?	Control Temp.	Damper	Air Filters No.	Type	Dimensions (In.)	Blowers In Evap. Unit?	No.	Nom. C.f.m.	R.p.m.	Net Weight	Water Usage Gpm/ton
§P-AU2	Fin & Tube	Air	...	...	F-22	2# 9	Yes	Yes	No	...	...	...	No	...	...	...	229	...
§P-AU3	Fin & Tube	Air	...	...	F-22	4# 14	Yes	Yes	No	...	...	...	No	...	...	...	370	...
§P-AU5	Fin & Tube	Air	...	...	F-22	5# 8	Yes	Yes	No	...	...	...	No	...	...	...	561	...

Emerson-Quiet Kool—Emerson-Quiet Kool Corp., Newark, N. J.

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacities (B.t.u.h.) Cooling	Heating	Heating Type	Compressor Motor Phase	Volts	Compressor No.	Make	Hp.	Cooling Method	Type	Cylin.	Bore & Stroke (In.)	R.p.m.
RC2B	54	20	29½	24,000	...	...	1—3	230	1	Tecumseh	2	Gas	Hermetic	2	1¾x1.2	1750
RC3B	54	20	29½	36,500	...	...	1—3	230	1	Tecumseh	3	Gas	Hermetic	2	1 15/16x1.2	1750
RC2A	54	20	29½	24,000	...	...	1—3	230	1	Tecumseh	2	Gas	Hermetic	2	1¾x1.2	1750
RC3A	54	20	29½	36,500	...	...	1—3	230	1	Tecumseh	3	Gas	Hermetic	2	1 15/16x1.2	1750

*Charge less than 3 lbs.

Model No.	Condenser Type	Cooling Medium	Evaporator Face Area (Sq. Ft.)	Rows	Refrigerant Type	Charge (Lbs.)	Factory Charged?	Control Temp.	Damper	Air Filters No.	Type	Dimensions (In.)	Blowers In Evap. Unit?	No.	Nom. C.f.m.	R.p.m.	Net Weight	Water Usage Gpm/ton
RC2B	Tube In Tube	Water	3.3	2	F-22	*	Yes	Yes	No	1	Disposable	25x20x1	Yes	1	800	Adj.	400	180
RC3B	Tube In Tube	Water	3.3	3	F-22	*	Yes	Yes	No	1	Disposable	25x20x1	Yes	1	1120	Adj.	400	265
RC2A	Tube In Tube	Water	3.3	2	F-22	*	Yes	Yes	No	1	Disposable	25x20x1	Yes	1	800	Adj.	400	180
RC3A	Tube In Tube	Water	3.3	3	F-22	*	Yes	Yes	No	1	Disposable	25x20x1	Yes	1	1120	Adj.	400	265

FarQuar—The Farquhar Co., Wilmington, Ohio

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacities (B.t.u.h.) Cooling	Heating	Heating Type	Compressor Motor Phase	Volts	Compressor No.	Make	Hp.	Cooling Method	Type	Cylin.	Bore & Stroke (In.)	R.p.m.
§AF-2	51	26	38	24,000	...	...	1	230	1	Copeland	2	Gas	Semi-Hermetic	2	1 15/16x1⅜	1750
§AF-3	54	28	38	36,000	...	...	1	230	1	Copeland	3	Gas	Semi-Hermetic	2	2¼x1 7/16	1750
§AF-5	59	33	42	60,000	...	...	1	230	1	Copeland	5	Gas	Semi-Hermetic	2	2½x1 13/16	1750
§AF-7.5	65	42	35	90,000	...	...	3	230	1	Copeland	7½	Gas	Semi-Hermetic	3	2⅝x2	1750
S-2	23	34	28	23,300	...	...	1	230	1	Tecumseh	2	Gas	Hermetic	2	1⅝x1.2	1750
SV-2	52	25	26	23,300	...	...	...	...	...	...	...	...	...	...	...	...
SP-2	12	18	24	23,300	...	...	...	...	...	...	...	...	...	...	...	...
S-3	23	34	28	35,200	...	...	1	230	1	Tecumseh	3	Gas	Hermetic	2	2x1.2	1750
SV-3	52	25	26	35,200	...	...	...	...	...	...	...	...	...	...	...	...
SP-3	12	18	24	35,200	...	...	...	...	...	...	...	...	...	...	...	...
S-5	32	46	37	56,700	...	...	1	230	1	Copeland	5	Gas	Semi-Hermetic	2	2½x1 13/16	1750
SV-5	60	32	31	56,700	...	...	...	...	...	...	...	...	...	...	...	...

§Upflow only. SV and SP units upflow or down flow. Horizontal flow units also available.

Model No.	Condenser Type	Cooling Medium	Evaporator Face Area (Sq. Ft.)	Rows	Refrigerant Type	Charge (Lbs.)	Factory Charged?	Control Temp.	Damper	Air Filters No.	Type	Dimensions (In.)	Blowers In Evap. Unit?	No.	Nom. C.f.m.	R.p.m.	Net Weight	Water Usage Gpm/ton
§AF-2	Cleanable Tube	Water	2.25	3	F-12	4	Yes	Yes	Yes	2	Disposable	1—10x20 1—20x20	Yes	1	800	760	675	3.0
§AF-3	Cleanable Tube	Water	2.25	4	F-12	5	Yes	Yes	Yes	2	Disposable	1—10x20 1—20x20	Yes	1	1200	800	875	4.5
§AF-5	Cleanable Tube	Water	4.0	4	F-12	6	Yes	Yes	Yes	2	Disposable	1—16x25 1—20x25	Yes	1	2000	730	1125	7.5
§AF-7.5	Shell & Coil	Water	6.0	4	F-12	12	Yes	Yes	Yes	4	Disposable	2—16x20 2—20x20	Yes	1	3000	560	1400	11.3
S-2	Finned Tube	Air	...	...	...	...	...	...	...	...	...	...	...	...	...	...	280	...
SV-2	...	...	2.25	3	F-22	12	No	Yes	Yes	2	Disposable	1—10x20 1—20x20	Yes	1	800	760	180	...
SP-2	...	...	2.25	3	F-22	12	No	Yes	No	...	...	...	No	...	...	...	60	...
S-3	Finned Tube	Air	...	...	...	...	...	...	...	...	...	...	...	...	...	...	380	...
SV-3	...	...	2.25	4	F-22	12	No	Yes	Yes	2	Disposable	1—10x20 1—20x20	Yes	1	1200	800	190	...
SP-3	...	...	2.25	4	F-22	12	No	Yes	No	...	...	...	No	...	...	...	65	...
S-5	Finned Tube	Air	...	...	...	...	...	...	...	...	...	...	...	...	...	...	800	...
SV-5	...	...	4.0	4	F-12	22	No	Yes	Yes	4	Disposable	2—16x20 2—10x16	Yes	1	2000	730	210	...

Fraser-Johnston—Fraser & Johnston Co., San Francisco

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacities (B.t.u.h.) Cooling	Heating	Heating Type	Compressor Motor Phase	Volts	Compressor No.	Make	Hp.	Cooling Method	Type	Cylin.	Bore & Stroke (In.)	R.p.m.
R2W12	13½	30	28	24,000	...	...	1—3	230/208	1	...	2	...	...	...	...	...
R3W12	13½	36	28	36,000	...	...	1—3	230/208	1	...	3	...	...	...	...	...

*Shipping weight. These are self-contained units. A variety of separate condensing units, evaporators, and blower coils are offered in 2, 3, and 5-hp. sizes.

Model No.	Condenser Type	Cooling Medium	Evaporator Face Area (Sq. Ft.)	Rows	Refrigerant Type	Charge (Lbs.)	Factory Charged?	Control Temp.	Damper	Air Filters No.	Type	Dimensions (In.)	Blowers In Evap. Unit?	No.	Nom. C.f.m.	R.p.m.	Net Weight	Water Usage Gpm/ton
R2W12	Shell & Tube	Water	...	...	F-12	...	...	...	...	...	...	...	...	...	670	...	386*	1.5
R3W12	Shell & Tube	Water	...	...	F-22	...	...	...	...	...	...	...	...	...	1000	...	415*	1.5

Fresh'nd-Aire—Fresh'nd-Aire Co., Div. of Cory Corp., Chicago

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacities (B.t.u.h.) Cooling	Heating	Heating Type	Compressor Motor Phase	Volts	Compressor No.	Make	Hp.	Cooling Method	Type	Cylin.	Bore & Stroke (In.)	R.p.m.
FR-201	20¼	29	24¾	...	...	...	1	230	1	Tecumseh	2	Suction	Hermetic	2	1⅝x1 1/16	1725
	16⅝	32⅛	30	...	...	...	...	...	...	...	...	...	...	...	...	...
FR301-3	26	40⅛	28¾	...	...	...	1—3	230/208/220	1	Tecumseh	3	Suction	Hermetic	2	2x1.2	1725
	16⅝	32⅛	30	...	...	...	...	...	...	...	...	...	...	...	...	...
FR501-3	39⅝	48⅛	34½	...	...	...	1—3	230/208/220	1	Tecumseh	5	Suction	Hermetic	4	1⅞x1 7/16	1725
	22	38	36	...	...	...	...	...	...	...	...	...	...	...	...	...
FQR20	16¼	26¼	28¾	...	...	...	1	230	1	Tecumseh	2	Suction	Hermetic	2	1⅝x1 1/16	1725
FTA40	24⅛	30	42	...	...	...	1	230	2	Tecumseh	2	Suction	Hermetic	2	1⅝x1 1/16	1725

FR models are horizontal flow.

Model No.	Condenser Type	Cooling Medium	Evaporator Face Area (Sq. Ft.)	Rows	Refrigerant Type	Charge (Lbs.)	Factory Charged?	Control Temp.	Damper	Air Filters No.	Type	Dimensions (In.)	Blowers In Evap. Unit?	No.	Nom. C.f.m.	R.p.m.	Net Weight	Water Usage Gpm/ton
FR-201	Fin Coil	Air	2.14	3	F-22	13	Yes	Yes	No	1	Disposable	27x16x1	Yes	1	800	1050	400	...
FR301-3	Fin Coil	Air	2.53	4	F-22	12	Yes	Yes	No	2	Disposable	27x16x1	Yes	1	1200	1050	625	...
FR501-3	Fin Coil	Air	4.45	3	F-22	16	Yes	Yes	No	2	Disposable	20x16x1	Yes	1	2000	610	935	...
FQR20	Fin Coil	Air	2.14	3	F-22	2.4	Yes	Yes	No	1	Disposable	14¾x12½x⅛	Yes	1	600	1075	244	...
FTA40	Fin Coil	Air	2.53	4	F-22	7.5	Yes	Yes	No	1	Disposable	27x11¾x1	Yes	2	·1200	1050	468	...

General Electric—General Electric Co., Tyler, Texas

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacities (B.t.u.h.) Cooling	Heating	Heating Type	Compressor Motor Phase	Volts	Compressor No.	Make	Hp.	Cooling Method	Type	Cylin.	Bore & Stroke (In.)	R.p.m.
TA25A	27¼	42⅛	27½	25,000	...	...	1	230	1	G.E.	2.47*	Refrig.	Hermetic	1	1⅞x.946	3450
TA33A	27¼	42⅛	27½	32,400	...	...	1—3	230/220/208	1	G.E.	3.14*	Refrig.	Hermetic	1	1⅞x1.19	3450
TA40A	27¼	42⅛	27½	39,200	...	...	1—3	230/220/208	1	G.E.	4.15*	Refrig.	Hermetic	1	1⅞x1.50	3450
TA53A	27¼	70⅛	27½	53,000	...	...	1—3	230/220/208	1	G.E.	4.75*	Refrig.	Hermetic	2	1⅞x.946	3450
TA63A	27¼	70⅛	27½	62,600	...	...	1—3	230/220/208	1	G.E.	6.0*	Refrig.	Hermetic	2	1⅞x1.19	3450
§FE20J5	56	31	30⅛	25,200	...	...	1	230	1	Tecumseh	2	Refrig.	Hermetic	2	1¾x1.2	1725
§FE25J5	55	31	30⅛	30,000	...	...	1	230	1	Tecumseh	3	Refrig.	Hermetic	2	2x1.2	1725
*FE30J5	55	31	30⅛	37,300	...	...	1	230	1	Tecumseh	3	Refrig.	Hermetic	2	2x1.2	1725
§FE50J5	55	35	30⅛	60,000	...	...	1	230	1	Tecumseh	5	Refrig.	Hermetic	4	1⅞x1.44	1725

§Upflow only. *Also available for down flow. TA models available for upflow, down flow, or horizontal flow. More than 250 combinations available. *Air-cooled units rated in kilowatts.

Model No.	Condenser Type	Cooling Medium	Evaporator Face Area (Sq. Ft.)	Rows	Refrigerant Type	Charge (Lbs.)	Factory Charged?	Control Temp.	Damper	Air Filters No.	Type	Dimensions (In.)	Blowers In Evap. Unit?	No.	Nom. C.f.m.	R.p.m.	Net Weight	Water Usage Gpm/ton
TA25A	Tube-In-Fin	Air	1.96	4	F-22	9	No	Yes	No	...	...	...	...	...	...	...	357	...
TA33A	Tube-In-Fin	Air	2.49	4	F-22	10	No	Yes	No	...	...	...	...	...	...	...	374	...
TA40A	Tube-In-Fin	Air	2.85	4	F-22	11	No	Yes	No	...	...	...	...	...	...	...	393	...
TA53A	Tube-In-Fin	Air	3.40	4	F-22	16	No	Yes	No	...	...	...	...	...	...	...	535	...
TA63A	Tube-In-Fin	Air	4.80	4	F-22	19	No	Yes	No	...	...	...	...	...	...	...	550	...
§FE20J5	Tube-In-Tube	Water	2.09	2	F-22	2.5	Yes	Yes	Opt.	...	...	...	...	...	...	...	300	1.58
§FE25J5	Tube-In-Tube	Water	2.49	3	F-22	3.5	Yes	Yes	Opt.	...	Opt.	...	Opt.	...	...	...	306	1.57
*FE30J5	Tube-In-Tube	Water	2.97	4	F-22	4.0	Yes	Yes	Opt.	...	Opt.	...	Opt.	...	...	...	350	1.61
§FE50J5	Tube-In-Tube	Water	4.91	3	F-22	6.0	Yes	Yes	Opt.	...	Opt.	...	Yes	1	2000	890	495	1.62

Gordon-air—Roberts-Gordon Appliance Corp., Buffalo

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacities (B.t.u.h.) Cooling	Heating	Heating Type	Compressor Motor Phase	Volts	Compressor No.	Make	Hp.	Cooling Method	Type	Cylin.	Bore & Stroke (In.)	R.p.m.
175GAR-1	24	28¼	37½	19,600	...	...	1	230	1	Tecumseh	2	Gas	Hermetic	2	1⅝x1 1/64	1725
§175D	16	22½	25¼	...	...	...	...	...	...	...	...	...	...	...	...	...
2GAR1-3	23	34	43¾	22,500	...	...	1—3	230/220	1	Tecumseh	2	Gas	Hermetic	2	1⅝x1.2	1725
2GAC1-3	33½	30	30	22,500	...	...	1—3	230/220	1	Tecumseh	2	Gas	Hermetic	2	1⅝x1.2	1725
§200D	16	22½	25¼	...	...	...	...	...	...	...	...	...	...	...	...	...
3GAR1-3	23	34	43¾	35,200	...	...	1—3	230/220	1	Tecumseh	3	Gas	Hermetic	2	2x1.2	1725
3GAC1-3	33½	30	30	35,300	...	...	1—3	230/220	1	Tecumseh	3	Gas	Hermetic	2	2x1.2	1725
§300D	16	22½	25¼	...	...	...	...	...	...	...	...	...	...	...	...	...
5GAR1-3	27	39½	53	56,300	...	...	1—3	230/220	1	Tecumseh	5	Gas	Hermetic	4	1⅝x1 7/16	1725
5GAC1-3	36	33	36	58,100	...	...	1—3	230/220	1	Tecumseh	5	Gas	Hermetic	4	1⅝x1 7/16	1725
§500D	20	21	34	...	...	...	...	...	...	...	...	...	...	...	...	...
2GASC	18⅝	30¼	38¼	18,250	...	...	1	230	1	Tecumseh	2	Gas	Hermetic	2	1⅝x1 1/64	1725
3GASC1-3	26⅝	30⅛	48⅛	34,000	...	...	1—3	230/220	1	Tecumseh	3	Gas	Hermetic	2	2x1.2	1725

§Upflow only. Also available in horizontal and down flow. "D" evaporator coils work with both GAR and GAC condensing units.

Model No.	Condenser Type	Cooling Medium	Evaporator Face Area (Sq. Ft.)	Rows	Refrigerant Type	Charge (Lbs.)	Factory Charged?	Control Temp.	Damper	Air Filters No.	Type	Dimensions (In.)	Blowers In Evap. Unit?	No.	Nom. C.f.m.	R.p.m.	Net Weight	Water Usage Gpm/ton
175GAR-1	Fin & Tube	Air	...	...	F-22	4	Yes	Yes	No	...	...	...	No	...	...	...	245	...
§175D	...	...	2.04	4	F-22	15	Yes	Yes	No	...	...	...	...	...	...	...	...	...
2GAR1-3	Fin & Tube	Air	...	...	F-22	6	Yes	Yes	No	...	...	...	No	...	...	...	483	...
2GAC1-3	Fin & Tube	Air	...	...	F-22	6	Yes	Yes	No	...	...	...	No	...	...	...	483	...
§200D	...	...	2.5	4	F-22	.5	Yes	Yes	No	...	...	...	...	...	...	...	...	...
3GAR1-3	Fin & Tube	Air	...	...	F-22	6	Yes	Yes	No	...	...	...	No	...	...	...	512	...
3GAC1-3	Fin & Tube	Air	...	...	F-22	6	Yes	Yes	No	...	...	...	No	...	...	...	512	...
§300D	...	...	2.91	4	F-22	.5	Yes	Yes	No	...	...	...	...	...	...	...	...	...
5GAR1-3	Fin & Tube	Air	...	...	F-22	10	Yes	Yes	No	...	...	...	No	...	...	...	690	...
5GAC1-3	Fin & Tube	Air	...	...	F-22	10	Yes	Yes	No	...	...	...	No	...	...	...	690	...
§500D	...	...	4.23	4	F-22	.5	Yes	Yes	No	...	...	...	...	...	...	...	...	...
2GASC	Fin & Tube	Air	1.8	4	F-22	4½	Yes	Yes	No	...	...	...	Yes	1	750	1140	249	...
3GASC1-3	Fin & Tube	Air	3.06	4	F-22	6	Yes	Yes	No	...	...	...	Yes	1	1200	1140	399	...

Residential

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacities (B.t.u.h.) Cooling	Heating	Heating Type	Compressor Motor Phase	Volts	Compressor No.	Make	Hp.	Cooling Method	Type	Cylin.	Bore & Stroke (In.)	R.p.m.
All-Year—Servel, Inc., Evansville, Ind.																
§FC-96	74	55¾	26½	42,000	96,000	Gas	Absorption Type		....	....	....	Absorp. Type (No Compressor)			....	....
§DE-96	84½	66¾	57½	65,000	96,000	Gas	Absorption Type		....	....	....	Absorp. Type (No Compressor)			....	....
§DE-144	84½	66¾	57½	65,000	144,000	Gas	Absorption Type		....	....	....	Absorp. Type (No Compressor)			....	....
§Upflow only.																
Amana—Amana Refrigeration, Inc., Amana, Iowa																
200C3	20½	31¼	43¾	20,000	....	....	1	230	1	Tecumseh	2	Refrig.	Hermetic	2	1⅝x1 1/64	1750
350C3	24¾	31¼	43¾	34,000	....	....	1	230	2	Tecumseh	2	Refrig.	Hermetic	2	1⅝x1 1/64	1750
Horizontal flow only.																
Conco—H. D. Conkey & Co., Mendota, Ill.																
§RH1A-20	60¾	23	19⅝	24,000	75,000	Gas/Oil	1	230	1	Tecumseh	2	Gas	Hermetic	2	....	....
§RH1A-30	64¾	24	19⅝	36,000	90,000	Gas/Oil	1	230	1	Tecumseh	3	Gas	Hermetic	2	....	....
§RH2A-20	60¾	23	19⅝	22,000	75,000	Gas/Oil	1	230	1	Tecumseh	2	Gas	Hermetic	2	....	....
§RH2A-30	64¾	24	19⅝	33,000	90,000	Gas/Oil	1	230	1	Tecumseh	3	Gas	Hermetic	2	....	....
§RL2A-20	42½	23	40	24,000	....	....	1	230	1	Tecumseh	2	Gas	Hermetic	2	....	....
§RL2A-30	42½	23	40	36,000	....	....	1	230	1	Tecumseh	3	Gas	Hermetic	2	....	....
§RL3A-20	42½	23	40	22,000	....	....	1	230	1	Tecumseh	2	Gas	Hermetic	2	....	....
§RL3A-30	42½	23	40	33,000	....	....	1	230	1	Tecumseh	3	Gas	Hermetic	2	....	....
RD1A-20	17	24	24	22,000	....	....	1	230	1	Tecumseh	2	Gas	Hermetic	2	....	....
RD1A-30	17	24	24	33,000	....	....	1	230	1	Tecumseh	3	Gas	Hermetic	2	....	....
§Upflow only. Downflow models also available. Upflow or horizontal flow on RD models only.																
Dowagiac—Dowagiac Steel Furnace Co., Dowagiac, Mich.																
DAC-2	17½	23	14⅝	20,500	....	....	1	230	1	Tecumseh	1½	Air	Hermetic	2	1⅝x1 1/64	1725
DAC-3	18⅝	34¼	12	33,800	....	....	1—3	230	1	Tecumseh	3	Air	Hermetic	2	2x1.2	1725
DAC-5	18⅝	37⅛	12	60,000	....	....	1—3	230	2	Tecumseh	5	Air	Hermetic	4	1¾x1 7/16	1725
Available also in water cooled. Dimensions are for evaporator only.																
Fedders-Adaptomatic—Fedders-Quigan Corp., Maspeth, L. I., N. Y.																
617AB-3	17⅝	37	27⅝	21,500	....	....	....	230	....	Tecumseh	2	Gas	Hermetic	2	....	....
730AB-3	20⅝	41⅛	36½	38,000	....	....	....	230	....	Tecumseh	2	Gas	Hermetic	2	....	....
*At .00 in. static pressure.																
Floatingair—Friedrich Refrigerators, Inc., San Antonio, Texas																
RE300	19½	25	25½	30-36,000*	....	....	1—3	230/220	1	Tecumseh	3	Refrig.	Sealed	2	1 15/16x3	1750
§RE, RF-301	40	25	25	30-36,000	....	....	1—3	230/220	1	Tecumseh	3	Refrig.	Sealed	2	1 15/16x3	1750
RE500	24	27⅛	27⅛	53,500	....	....	1—3	230/220	1	Tecumseh	5	Refrig.	Sealed	2	2½x1 13/16	1750
§RE, RF501	48	27⅛	27⅛	53,500	....	....	1—3	230/220	1	Tecumseh	5	Refrig.	Sealed	2	2½x1 13/16	1750
RE750	28½	32	32	80,000	....	....	3	220	1	Copeland	7½	Refrig.	Semi-Sealed	2	2⅝x2	1750
§RE, RF751	57	32	32	80,000	....	....	3	220	1	Copeland	7½	Refrig.	Semi-Sealed	2	2⅝x2	1750
All evaporator coils are equipped with expansion valves. Air-cooled condensing units are remote. §Upflow only. Horizontal flow also available.																
Frigidaire—Frigidaire Div., General Motors Corp., Dayton																
ACW-200	54⅝*	23	34½	24,300	....	....	1—3	230/208/220‡	1	Frigidaire	2	Water	Sealed Recip.	2	1 15/16x1½	1725
ACW-300	61⅞*	25	38½	37,200	....	....	1—3	230/208/220	1	Frigidaire	3	Water	Sealed Recip.	2	2⅜x1⅝	1725
ACW-500	70⅞*	28	38½	59,800	....	....	1—3	230/208/220	1	Frigidaire	5	Water	Sealed Recip.	2	2⅜x2⅜	1725
§AGT-2108	75	46	33½	24,300	86,400	Gas	1—3	230/208/220	1	Frigidaire	2	Water	Sealed Recip.	2	1 15/16x1½	1725
§AGT-3108	75	46	33½	37,100	86,400	Gas	1—3	230/208/220	1	Frigidaire	3	Water	Sealed Recip.	2	2⅜x1⅝	1725
§AOT-284	75	46	36½	24,300	84,000	Oil	1—3	230/208/220	1	Frigidaire	2	Water	Sealed Recip.	2	1 15/16x1½	1725
§AOT-384	75	46	36½	37,100	84,000	Oil	1—3	230/208/220	1	Frigidaire	3	Water	Sealed Recip.	2	2⅜x1⅝	1725
§"G" and "O" models upflow only. *Includes optional head. **Also available in 440, 3 phase. †ACW weights include collar. All units available for air cooled or evaporative operation.																
Genatron—General Air Conditioning Corp., Los Angeles																
FL-2	43	30	21	24,000	....	....	1	208/220	1	Tecumseh	2	Gas	Hermetic	1	....	....
Hastings—Hastings Air Conditioning Co., Inc., Hastings, Neb.																
KP-15B	22½	40½	16¼	36,000*	....	....	1	230	1	Tecumseh	1½	Suction	Reciprocating	2	....	....
Horizontal flow. *Based on 95-75° air, 4 g.p.m. of 65° water. †Based on 65° water.																
Heil—The Heil Co., Milwaukee																
†SCH-200	23	30	32	20,000	....	....	1	230	1	Tecumseh	1¾	Gas	Hermetic	2	....	....
†SCH-400	24	32	59	40,000	....	....	1	230	2	Tecumseh	3½	Gas	Hermetic	2	....	....
*ACR-205	23	24	27	20,500	....	....	1	230	1	Tecumseh	2	Gas	Hermetic	2	1⅝x1 1/64	....
*ACR-225	27	33	32	22,500	....	....	1—3	230	1	Tecumseh	2	Gas	Hermetic	2	1¾x1.2	....
*ACR-340	27	33	32	34,000	....	....	1—3	230	1	Tecumseh	3	Gas	Hermetic	2	2x1.2	....
*ACR-600	33	37	37	60,000	....	....	1—3	230	1	Tecumseh	5	Gas	Hermetic	4	1¾x1 7/16	....
§ACB-201	53	24	44	24,000	....	....	1—3	230	1	Tecumseh	2	Gas	Hermetic	2	1¾x1.2	....
§ACB-301	53	24	44	36,000	....	....	1—3	230	1	Tecumseh	3	Gas	Hermetic	2	2x1.2	....
Cooling capacity rated under ASRE standard. *Universal application. †Horizontal only. §Upflow only. Available in AC series without blower or filter.																
Iron Fireman—Iron Fireman Mfg. Co., Cleveland																
C-201-3	38	19	25	24,100	....	....	1—3	230/220	1	Tecumseh	2	Water	Hermetic	2	1¾x1.2	....
C-301-3	38	19	25	36,000	....	....	1—3	230/220	1	Tecumseh	3	Water	Hermetic	2	2x1.2	....
C-501-3	41	21	33	65,800	....	....	1—3	230/220	1	Tecumseh	5	Water	Hermetic	....	....	....
HDC-201-3	21	24	42	24,100	....	....	1—3	230/220	1	Tecumseh	2	Water	Hermetic	2	1¾x1.2	....
HDC-301-3	21	24	42	36,100	....	....	1—3	230/220	1	Tecumseh	3	Water	Hermetic	2	2x1.2	....
HFC-201-3	63	33	19	24,100	....	....	1—3	230/220	1	Tecumseh	2	Water	Hermetic	2	1¾x1.2	....
HFC-301-3	63	33	19	36,000	....	....	1—3	230/220	1	Tecumseh	3	Water	Hermetic	2	2x1.2	....
HFC-501-3	63	33	22	65,800	....	....	1—3	230/220	1	Tecumseh	5	Water	Hermetic	....	....	....
RAS-201-3	23	34	43	22,500	....	....	1—3	230/220	1	Tecumseh	2	Air	Hermetic	....	....	....
RAS-301-3	23	34	43	35,200	....	....	1—3	230/220	1	Tecumseh	3	Air	Hermetic	....	....	....
RAS-501-3	27	39	52	60,000	....	....	1—3	230/220	1	Tecumseh	5	Air	Hermetic	....	....	....
RAD model specifications same as RAS.																
Janitrol—Surface Combustion Corp., Columbus, Ohio																
§SAC24-45	60¼	26½	26	26,800	....	....	1	230	1	Tecumseh	2	Refrig.	Hermetic	2	1.75x1.2	1725
§SAC36-45	60¼	26½	26	36,900	....	....	1—3	230/208/220	1	Tecumseh	3	Refrig.	Hermetic	2	2x1.2	1725
§SAC60-45	60¼	40½	26	63,700	....	....	1—3	230/208/220	2	Tecumseh	2, 3	Refrig.	Hermetic	2, 2	1.75x1.2, 2x1.2	1725
§SVW606-55	60¼	40½	26	68,200	....	....	3	208/220	1	Tecumseh	5	Refrig.	Hermetic	4	1.75x1.44	1725
*SRA7-65	23	29⅝	29⅝	20,600	....	....	1	230	1	Tecumseh	2	Refrig.	Hermetic	2	1.75x1.2	1725
20B	36	24	19¼	....	....	....	....	....	....	....	....	....	....	....	....	....
§20D	17	22	28	....	....	....	....	....	....	....	....	....	....	....	....	....
*SRA9-65	26	33⅝	33⅝	35,700	....	....	1—3	230/208/220	1	Tecumseh	3	Refrig.	Hermetic	2	2x1.2	1725
30B	36	24	19¼	....	....	....	....	....	....	....	....	....	....	....	....	....
§30D	17	22	28	....	....	....	....	....	....	....	....	....	....	....	....	....
*SRA11-65	30	39½	39½	50,000	....	....	1—3	230/208/220	1	Tecumseh	5	Refrig.	Hermetic	3	1.75x1.44	1725
50B	40	28	23¼	....	....	....	....	....	....	....	....	....	....	....	....	....
*A401(3)-75	30	39½	39½	46,100	....	....	1—3	230/208/220	1	Westinghouse	5	Refrig.	Access. Hermetic	3	2.38x2.13	1725
50B	40	28	23¼	....	....	....	....	....	....	....	....	....	....	....	....	....
*A602-75	49½	39½	51½	75,000	....	....	3	208/220	1	Westinghouse	7½	Refrig.	Access. Hermetic	3	2.38x2.13	1725
†71B	28⅝	48	30⅝	....	....	....	....	....	....	....	....	....	....	....	....	....
§Upflow only. SRA and A units also available in horizontal and down flow. *Capacities at 45° suction temperature, 95° F. condenser air. †Horizontal flow only.																
Jettronaire—Jettronaire, Inc., Pittsburgh																
1HAS17	16⅝	26½	32¼	18,000	....	....	1	230	1	Tecumseh	2	Gas	Hermetic	2	1 5/6x1 1/64	1725
1HAS30	23⅞	29	43½	22,000	....	....	1	230	1	Bendix-West.	2	Gas	Hermetic	2	....	1725
1HAS31	23⅞	29	43½	36,000	....	....	1	230	2	Tecumseh	3½	Gas	Hermetic	2	1 5/6x1 1/64	1725
1H261	59½	22	22	24,000	....	....	1	115/230	1	Tecumseh	2	Gas	Hermetic	2	....	1725
1H361	59½	22	22	36,000	....	....	1—3	115/230/08/220	1	Tecumseh	3	Gas	Hermetic	2	1.2x2	1725
1H461	66½	26	26	48,000	....	....	1—3	115/230/08/220	1	Tecumseh	4	Gas	Hermetic	2	....	1725
1H661	66½	26	26	72,000	....	....	1—3	115/230/08/220	1	Tecumseh	6	Gas	Hermetic	4	....	1725
1HAR170	40⅞	26¼	26¼	18,200	....	....	1	230	1	Tecumseh	1¾	Gas	Hermetic	2	1 5/6x1 1/64	1725
§HEU170	15	20	16⅝	....	....	....	....	....	....	....	....	....	....	....	....	....
§HAV170	60	20	26¼	....	....	....	....	....	....	....	....	....	....	....	....	....
1HAR31	45⅛	30⅝	30⅝	33,200	....	....	1—3	230/208/220	1	Tecumseh	3	Gas	Hermetic	2	1.2x1	1725
§HEU-30	15	20	18⅝	....	....	....	....	....	....	....	....	....	....	....	....	....
§HAV30	60	20	26¼	....	....	....	....	....	....	....	....	....	....	....	....	....
1HAR51	45⅝	36⅝	36⅝	56,000	....	....	1—3	230/208/220	1	Tecumseh	5	Gas	Hermetic	4	1¾x1 7/16	1725
§HEV50	18⅛	28⅝	19⅝	....	....	....	....	....	....	....	....	....	....	....	....	....
§HAV50	60	27	32	....	....	....	....	....	....	....	....	....	....	....	....	....
Majestic—The Majestic Co., Inc., Huntington, Ind.																
§U-2	62¼	22	22	24,000	....	....	1—3	220	1	Tecumseh	....	....	....	....	....	....
§U-3	68⅝	26	26	36,000	....	....	1—3	220	1	Tecumseh	....	....	....	....	....	....
§U-5	86½	29½	29½	60,000	....	....	1—3	220	1	Tecumseh	....	....	....	....	....	....
§Also available horizontal and upflow in remote units. Also available air cooled.																

Residential

Model No.	Condenser Type	Cooling Medium	Face Area Evaporator (Sq. Ft.)	Rows	Refrigerant Type	Charge (Lbs.)	Factory Charged?	Control Temp.	Damper	Air Filters No.	Type	Dimensions (In.)	Blowers In Evap. Unit?	No.	Nom. C.f.m.	R.p.m.	Net Weight	Water Usage Gpm/ton
All-Year—Servel, Inc., Evansville, Ind.																		
§FC-96	....	Water	....	....	Water	....	Yes	Yes	Yes	2	Disposable	16x25x1	Yes	1	1400	....	1060	....
§DE-96	....	Water	....	....	Water	....	Yes	Yes	Yes	6	Disposable	4—10x20x2 2—20x20x2	Yes	1	2000	....	2394	....
§DE-144	....	Water	....	....	Water	....	Yes	Yes	Yes	6	Disposable	4—10x20x2 2—20x20x2	Yes	1	2000	....	2556	....
Amana—Amana Refrigeration, Inc., Amana, Iowa																		
200C3	Integral	Air	1.8	4	F-22	3	Yes	Yes	No	1	Disposable	14x20x1	Yes	1	1100	1100	281	....
350C3	Integral	Air	2.58	4	F-22	5	Yes	Yes	No	2	Disposable	14x20x1	Yes	1	1400	1100	394	....
Conco—H. D. Conkey & Co., Mendota, Ill.																		
§RH1A-20	Tube In Tube	Water	2.1	3	F-22	....	Yes	Yes	Yes	1	Disposable	16x25	No	1	770	....	....	1.44
§RH1A-30	Tube In Tube	Water	2.1	4	F-22	....	Yes	Yes	Yes	1	Disposable	20x25	No	1	1150	....	....	1.44
§RH2A-20	Fin & Tube	Air	2.6	3	F-22	....	Yes	Yes	Yes	1	Disposable	16x25	No	1	770	....	....	....
§RH2A-30	Fin & Tube	Air	2.6	4	F-22	....	Yes	Yes	Yes	1	Disposable	20x25	No	1	1150	....	....	....
§RL2A-20	Tube In Tube	Water	2.1	3	F-22	....	Yes	Yes	Opt.	1	Disposable	20x20	Yes	1	800	....	....	1.44
§RL2A-30	Tube In Tube	Water	2.1	4	F-22	....	Yes	Yes	Opt.	1	Disposable	20x20	Yes	1	1200	....	....	1.44
§RL3A-20	Fin & Tube	Air	2.6	3	F-22	....	Yes	Yes	Opt.	1	Disposable	20x20	Yes	1	800	....	....	....
§RL3A-30	Fin & Tube	Air	2.6	4	F-22	....	Yes	Yes	Opt.	1	Disposable	20x20	Yes	1	1300	....	....	....
RD1A-20	Fin & Tube	Air	2.6	3	F-22	....	Yes	Yes	No	....	....	....	....	....	....	....	....	....
RD1A-30	Fin & Tube	Air	2.6	4	F-22	....	Yes	Yes	No	....	....	....	....	....	....	....	....	....
Dowagiac—Dowagiac Steel Furnace Co., Dowagiac, Mich.																		
DAC-2	....	Water	2.43	2	F-22	2# 11	Yes	Yes	No	2	Disposable	16x25x1	Yes	1	800	566	534	....
DAC-3	....	Water	2.52	4	F-22	2# 15	Yes	Yes	No	2	Disposable	16x25x1	Yes	1	1200	763	564	....
DAC-5	....	Water	4.15	4	F-22	2# 11	Yes	Yes	No	2	Disposable	20x25x1	Yes	2	2000	659	935	....
Fedders-Adaptomatic—Fedders-Quigan Corp., Maspeth, L. I., N. Y.																		
617AB-3	....	....	....	4	F-22	....	....	....	....	....	....	....	Yes	1	780*	1100	225	....
730AB-3	....	....	....	4	F-22	....	....	....	....	....	....	....	Yes	1	1250*	1100	355	....
Floatingair—Friedrich Refrigerators, Inc., San Antonio, Texas																		
RE300	Finned Tube	Air	2.50	4	F-22	Holding	No	Yes	No	....	....	....	No	....	....	....	75	....
§RE, RF-301	Finned Tube	Air	2.50	4	F-22	Holding	No	Yes	No	....	....	....	Yes	1	1200	710-960	165	....
RE500	Finned Tube	Air	4.4	4	F-22	Holding	No	Yes	No	....	....	....	No	....	....	....	110	....
§RE, RF501	Finned Tube	Air	4.4	4	F-22	Holding	No	Yes	No	....	....	....	Yes	1	2000	710-960	240	....
RE750	Finned Tube	Air	6.19	4	F-12	Holding	No	Yes	No	....	....	....	No	....	....	....	225	....
§RE, RF751	Finned Tube	Air	6.19	4	F-12	Holding	No	Yes	No	....	....	....	Yes	1	3000	550-740	430	....
Frigidaire—Frigidaire Div., General Motors Corp., Dayton																		
ACW-200	Shell & Coil	Water	2.04	4	F-12	7½	Yes	Yes	No	1	Disposable	16x20x1	Yes	1	880	865	498†	1.65
ACW-300	Shell & Coil	Water	3.02	4	F-12	10	Yes	Yes	No	1	Disposable	25x20x1	Yes	1	1230	780	635†	1.7
ACW-500	Shell & Coil	Water	4.38	4	F-12	8	Yes	Yes	No	2	Disposable	16x25x1	Yes	1	2000	735	725†	1.6
§AGT-2108	Shell and Coil	Water	1.79	4	F-12	6½	Yes	Yes	Yes	2	Disposable	20x16x1	Yes	1	915	1040	724	1.65
§AGT-3108	Shell & Coil	Water	2.68	4	F-12	6½	Yes	Yes	Yes	2	Disposable	20x16x1	Yes	1	1100	1040	790	1.58
§AOT-284	Shell and Coil	Water	1.79	4	F-12	6½	Yes	Yes	Yes	2	Disposable	20x16x1	Yes	1	915	1040	792	1.65
§AOT-384	Shell & Coil	Water	2.68	4	F-12	6½	Yes	Yes	Yes	2	Disposable	20x16x1	Yes	1	1100	1040	862	1.58
Genatron—General Air Conditioning Corp., Los Angeles																		
FL-2	Fin Tube	Air	....	....	F-22	....	....	Yes	Yes	1	Permanent	9x30	Yes	1	900	....	325	....
Hastings—Hastings Air Conditioning Co., Inc., Hastings, Neb.																		
KP-15B	....	Water	3.0	6	F-22	1 15/16	Yes	Yes	No	2	Disposable	16x20x2	Yes	2	1200	850	559	1.3†
Heil—The Heil Co., Milwaukee																		
†SCH-200	Fin Tube	Air	1.87	3	F-22	....	Yes	Yes	No	....	....	....	Yes	1	750	....	240	....
†SCH-400	Fin Tube	Air	2.8	4	F-22	....	Yes	Yes	No	....	....	....	Yes	1	1350	....	370	....
*ACR-205	Fin Tube	Air	2.2	3	F-22	....	Yes	Yes	No	....	....	....	No	....	....	....	256	....
*ACR-225	Fin Tube	Air	2.1	3	F-22	....	Yes	Yes	No	....	....	....	No	....	....	....	365	....
*ACR-340	Fin Tube	Air	2.5	4	F-22	....	Yes	Yes	No	....	....	....	No	....	....	....	397	....
*ACR-600	Fin Tube	Air	4.1	4	F-22	....	Yes	Yes	No	....	....	....	No	....	....	....	606	....
§ACB-201	Fin Tube	Water	1.8	4	F-22	2# 11	Yes	Yes	No	2	Disposable	20x15x1	Yes	1	800	550	490	1.5
§ACB-301	Fin Tube	Water	2.9	4	F-22	2# 15	Yes	Yes	No	2	Disposable	20x15x1	Yes	1	1200	625	510	1.5
Iron Fireman—Iron Fireman Mfg. Co., Cleveland																		
C-201-3	Cleanable	Water	1.9	4	F-22	¾	....	....	....	....	....	....	....	....	....	....	....	3.0
C-301-3	Cleanable	Water	2.7	4	F-22	¾	....	....	....	....	....	....	....	....	....	....	....	4.5
C-501-3	Cleanable	Water	4.2	4	F-22	1	....	....	....	....	....	....	....	....	....	....	....	6.0
HDC-201-3	Cleanable	Water	1.9	4	F-22	¾	....	....	....	....	....	....	....	....	....	....	....	3.0
HDC-301-3	Cleanable	Water	2.7	4	F-22	¾	....	....	....	....	....	....	....	....	....	....	....	4.5
HFC-201-3	Cleanable	Water	1.9	4	F-22	¾	....	....	....	....	....	....	....	....	1785	....	....	3.0
HFC-301-3	Cleanable	Water	2.7	4	F-22	¾	....	....	....	....	....	....	....	....	1785	....	....	4.5
HFC-501-3	Cleanable	Water	4.2	4	F-22	1	....	....	....	....	....	....	....	....	2500	....	....	6.0
RAS-201-3	Cleanable	Air	2.0	4	F-22	6	....	....	....	....	....	....	....	....	....	....	....	....
RAS-301-3	Cleanable	Air	2.9	4	F-22	6	....	....	....	....	....	....	....	....	....	....	....	....
RAS-501-3	Cleanable	Air	4.2	4	F-22	10	....	....	....	....	....	....	....	....	....	....	....	....
Janitrol—Surface Combustion Corp., Columbus, Ohio																		
§SAC24-45	Tube In Tube	Water	2.12	3	F-22	2.7	Yes	Yes	No	2	Disposable	16x25x1	Yes	1	800	790	....	1.47
§SAC36-45	Tube In Tube	Water	2.53	4	F-22	2.9	Yes	Yes	No	2	Disposable	16x25x1	Yes	1	1200	875	....	1.62
§SAC60-45	Tube In Tube	Water	4.15	4	F-22	2.7/2.9	Yes	Yes	No	3	Disposable	20x25x1	Yes	1	2000	900	....	1.56
§SVW606-55	Tube In Tube	Water	4.15	4	F-22	4.5	Yes	Yes	No	3	Disposable	20x25x1	Yes	1	2000	900	....	1.51
*SRA7-65	Fin & Tube	Air	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
20B	....	....	2.19	3	F-22	....	No	Yes	No	1	Permanent	16x20x1	Yes	1	800	700	....	....
§20D	....	....	3.40	2	F-22	....	No	Yes	No	....	....	....	No	....	800	....	....	....
*SRA9-65	Fin & Tube	Air	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
30B	....	....	2.19	4	F-22	....	No	Yes	No	1	Permanent	16x20x1	Yes	1	1200	920	....	....
§30D	....	....	3.40	3	F-22	....	No	Yes	No	....	....	....	No	....	1200	....	....	....
*SRA11-65	Fin & Tube	Air	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
50B	....	....	3.79	4	F-12/22	....	No	Yes	No	1	Permanent	20x25x1	Yes	1	2000	780	....	....
*A401(3)-75	Fin & Tube	Air	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
50B	....	....	3.79	4	F-12/22	....	No	Yes	No	1	Permanent	20x25x1	Yes	1	2000	780	....	....
*A602-75	Fin & Tube	Air	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
†71B	....	....	6.67	3	F-22	....	No	Yes	No	3	Disposable	16x25x1	Yes	2	3000	880	....	....
Jettronaire—Jettronaire, Inc., Pittsburgh																		
1HAS17	Fin & Tube	Air	1.2	4	F-22	....	Yes	....	....	1	Disposable	....	Yes	1	500	1550	255	....
1HAS30	Fin & Tube	Air	1.5	3	F-22	....	Yes	....	....	1	Disposable	....	Yes	1	800	1075	320	....
1HAS31	Fin & Tube	Air	2.0	4	F-22	....	Yes	....	....	1	Disposable	....	Yes	1	1200	1075	450	....
1H261	Tube In Tube	Water	2.25	3	F-22	4.5	Yes	Yes	No	1	Disposable	18x18x⅞	Yes	1	900	750	375	1.5
1H361	Tube In Tube	Water	2.25	4	F-22	5.5	Yes	Yes	No	1	Disposable	18x18x⅞	Yes	1	1350	880	395	1.5
1H461	Tube In Tube	Water	3.05	5	F-22	6.5	Yes	Yes	No	1	Disposable	22x22x⅞	Yes	1	1800	925	475	1.5
1H661	Tube In Tube	Water	3.50	6	F-22	8.5	Yes	Yes	No	1	Disposable	22x22x⅞	Yes	1	2400	800	545	1.5
1HAR170	Fin & Tube	Air	....	....	F-22	3.25	Yes	Yes	No	1	Disposable	....	....	....	....	950	249	....
§HEU170	....	....	2.33	2	F-22	....	Yes	Yes	No	1	Disposable	....	....	....	....	....	28	....
§HAV170	....	....	2.29	2	F-22	....	Yes	....	No	1	Disposable	....	Yes	1	700	....	75	....
1HAR31	Fin & Tube	Air	....	....	F-22	7.75	Yes	Yes	No	1	Disposable	....	....	....	....	850	363	....
§HEU-30	....	....	2.71	3	F-22	....	Yes	....	....	1	Disposable	....	....	....	....	....	33	....
§HAV30	....	....	2.86	3	F-22	....	Yes	....	No	1	Disposable	....	Yes	1	1200	....	83	....
1HAR51	Fin & Tube	Air	....	....	F-22	11.5	Yes	Yes	No	1	Disposable	....	....	....	....	645	528	....
§HEV50	....	....	4.12	3	F-22	....	Yes	....	....	1	Disposable	....	....	....	....	....	46	....
§HAV50	....	....	....	....	F-22	....	Yes	....	No	1	Disposable	....	Yes	1	2000	....	121	....
Majestic—The Majestic Co., Inc., Huntington, Ind.																		
§U-2	Fin-Tube	Water	....	4	F-22	2# 4	Yes	Yes	Avail.	1	Disposable	20x20x1	Yes	1	800	....	175	2.0
§U-3	Fin-Tube	Water	....	4	F-22	3# 6	Yes	Yes	Avail.	1	Disposable	20x25x1	Yes	1	1200	....	225	3.5
§U-5	Fin-Tube	Water	....	4	F-22	5# 10	Yes	Yes	Avail.	2	Disposable	10x25x1 16x25x1	Yes	1	2000	....	300	6.0

Residential

Kauffman—Kauffman Air Conditioning Co., St. Louis

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacities (B.t.u.h.) Cooling	Heating	Heating Type	Compressor Motor Phase	Volts	Compressor No.	Make	Hp.	Cooling Method	Type	Cylin.	Bore & Stroke (In.)	R.p.m.
175-RA	35	27	30	....	....	....	1	220	1	Tecumseh	1¾	....	....	2	....	1750
21 RA	24	36	44½	....	....	....	1—3	220	1	Tecumseh	2	....	....	2	....	1750
30 RA	24	36	44½	....	....	....	1—3	220	1	Tecumseh	3	....	....	2	....	1750
51 RA	28	41½	53	....	....	....	1—3	220	1	Tecumseh	5	....	....	4	....	1750
21 VW	53	20	26	....	....	....	1—3	220	1	Tecumseh	2	....	....	2	....	1750
31 VW	53	20	26	....	....	....	1—3	220	1	Tecumseh	3	....	....	2	....	1750
51VW	66	22	25	....	....	....	1—3	220	1	Tecumseh	5	....	....	4	....	1750

Model No.	Condenser Type	Cooling Medium	Evaporator Face Area (Sq. Ft.)	Rows	Refrigerant Type	Charge (Lbs.)	Factory Charged?	Control Temp.	Damper	Air Filters No.	Type	Dimensions (In.)	Blowers In Evap. Unit?	No.	Nom. C.f.m.	R.p.m.	Net Weight	Water Usage Gpm/ton
175-RA	Fin & Tube	Air	2.0	3	F-22	5	Yes	Yes	No	....	Disposable	....	No	1	....	....	245	....
21 RA	Fin & Tube	Air	2.0	4	F-22	6	Yes	Yes	No	....	Disposable	....	Yes	1	....	....	410	....
30 RA	Fin & Tube	Air	3.0	4	F-22	6	Yes	Yes	No	....	Disposable	....	Yes	1	....	....	439	....
51 RA	Fin & Tube	Air	4.0	4	F-22	10	Yes	Yes	No	....	Disposable	....	Yes	1	....	....	640	....
21 VW	Shell & Coil	Water	....	4	F-22	2# 11	Yes	Yes	No	....	Disposable	....	Yes	1	....	....	520	3.21
31 VW	Shell & Coil	Water	....	4	F-22	2# 15	Yes	Yes	No	....	Disposable	....	Yes	1	....	....	540	4.9
51VW	Shell & Coil	Water	....	4	F-22	5# 5	Yes	Yes	No	....	Disposable	....	Yes	1	....	....	630	6.0

Horizontal flow units also available in 2 and 3-hp. sizes.

Laurel—Laurel Products, Inc., Laurel, Miss.

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacities (B.t.u.h.) Cooling	Heating	Heating Type	Compressor Motor Phase	Volts	Compressor No.	Make	Hp.	Cooling Method	Type	Cylin.	Bore & Stroke (In.)	R.p.m.
CCU-2E	20	28	28	19,000	....	....	1	230	1	Tecumseh	1¾	Gas	....	2	1¾x1 1/64	1725
*AHH-2E	19	23	32	19,000	....	....	....	115	....	....	....	....	....	....	....	....
*FCH-2E	13	23	12	....	....	....	....	....	....	....	....	....	....	....	....	....
CCU-2	27	26½	48	24,000	....	....	1	230	1	Tecumseh	2	Gas	....	2	1⅝x1.2	1725
§AHV-2	48	27	20	24,000	....	....	....	230	....	....	....	....	....	....	....	....
§FCV-2	16¾	20¼	18¾	....	....	....	....	....	....	....	....	....	....	....	....	....
CCU-3	33	30½	54	36,000	....	....	1—3	230	1	Tecumseh	3	Gas	....	2	2x1.2	1725
§AHV-3	48	35	20	36,000	....	....	....	230	....	....	....	....	....	....	....	....
§FCV-3	16¾	30¼	24⅛	....	....	....	....	....	....	....	....	....	....	....	....	....
CCU-5	35	32	76	60,000	....	....	1—3	230	1	Tecumseh	5	Gas	....	2	1¾x1 7/16	1725
§AHV-5	49	30	27	60,000	....	....	....	230	....	....	....	....	....	....	....	....
§FCV-5	19¾	22	31⅝	....	....	....	....	....	....	....	....	....	....	....	....	....

Model No.	Condenser Type	Cooling Medium	Evaporator Face Area (Sq. Ft.)	Rows	Refrigerant Type	Charge (Lbs.)	Factory Charged?	Control Temp.	Damper	Air Filters No.	Type	Dimensions (In.)	Blowers In Evap. Unit?	No.	Nom. C.f.m.	R.p.m.	Net Weight	Water Usage Gpm/ton
CCU-2E	Fin & Tube	Air	....	....	F-22	5	Yes	Yes	No	....	....	....	....	....	....	....	230	....
*AHH-2E	Fin & Tube	Air	1.5	3	F-22	....	....	No	No	1	Disposable	14x20x1	Yes	1	675	550-600	144	....
*FCH-2E	Fin & Tube	Air	1.5	3	....	....	....	No	No	....	....	....	No	....	....	....	55	....
CCU-2	Fin & Tube	Air	....	....	F-22	6	Yes	Yes	No	....	....	....	....	....	....	....	412	....
§AHV-2	Fin & Tube	Air	2.1	3	F-22	....	....	No	No	1	Disposable	20x25x1	Yes	1	800	640-880	211	....
§FCV-2	Fin & Tube	Air	2.7	3	....	....	....	No	No	....	....	....	No	....	....	....	60	....
CCU-3	Fin & Tube	Air	....	....	F-22	9	Yes	Yes	No	....	....	....	....	....	....	....	510	....
§AHV-3	Fin & Tube	Air	3.1	3	F-22	....	....	No	No	2	Disposable	20x16x1	Yes	1	1200	540-750	320	....
§FCV-3	Fin & Tube	Air	3.68	3	....	....	....	No	No	....	....	....	No	....	....	....	75	....
CCU-5	Fin & Tube	Air	....	....	F-22	15	Yes	Yes	No	....	....	....	....	....	....	....	830	....
§AHV-5	Fin & Tube	Air	5.2	3	F-22	....	....	No	No	2	Disposable	1—20x20x1 1—16x20x1	Yes	1	2000	475-650	400	....
§FCV-5	Fin & Tube	Air	6.2	3	....	....	....	No	No	....	....	....	No	....	....	....	130	....

*Horizontal flow only. §Upflow only. Also available in horizontal flow.

Lennox—Lennox Industries, Inc., Marshalltown, Iowa

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacities (B.t.u.h.) Cooling	Heating	Heating Type	Compressor Motor Phase	Volts	Compressor No.	Make	Hp.	Cooling Method	Type	Cylin.	Bore & Stroke (In.)	R.p.m.
§CB11-201-3	61¼	22¾	27¾	24,000	....	....	1—3	230/208/220	1	Tecumseh	2	Refrig.	Hermetic	2	1¾x1.2	1725
§CB11-301-3	61¼	22¾	27¾	36,000	....	....	1—3	230/208/220	1	Tecumseh	3	Refrig.	Hermetic	2	2x1.2	1725
§CB11-501-3	65¼	28	27¾	60,000	....	....	1—3	230/208/220	1	Tecumseh	5	Refrig.	Hermetic	4	1¾x1 7/15	1725
*CHA2-201	22	30¾	46	24,000	....	....	1	230	2	Tecumseh	1	Refrig.	Hermetic	2	1 5/16x1 1/64	1725
*CHA2-301	28	35¾	52¾	40,000	....	....	1	230	2	Tecumseh	1¾	Refrig.	Hermetic	2	1⅝x1 1/64	1725
HSA2-201	23	31	35¾	24,000	....	....	1	230	1	Tecumseh	2	Refrig.	Hermetic	2	1¾x1.2	1725
§LS1-200	18⅛	23¼	20¾	24,000	....	....	....	....	....	....	....	....	....	....	....	....
§LSB1-200	61¼	22¾	27¾	24,000	....	....	....	....	....	....	....	....	....	....	....	....
HSA3-301 & 303	24¼	48¼	33¾	36,000	....	....	1—3	230/208/220	1	Tecumseh	3	Refrig.	Hermetic	2	2x1.2	1725
§LS1-300	18⅛	23¼	20¾	36,000	....	....	....	....	....	....	....	....	....	....	....	....
§LSB1-300	61¼	22¾	27¾	36,000	....	....	....	....	....	....	....	....	....	....	....	....
HSA3-501-3	28	58	37¾	60,000	....	....	1—3	230/208/220	1	Tecumseh	5	Refrig.	Hermetic	4	1¾x1 7/16	1725
§LS1-500	25⅝	35	20½	60,000	....	....	....	....	....	....	....	....	....	....	....	....
§LSB1-500	65¼	28	28	60,000	....	....	....	....	....	....	....	....	....	....	....	....
HSA2-753	33¾	67¼	35¼	90,000	....	....	3	208/220	1	Copeland	7½	Refrig.	Semi-Hermetic	3	2⅝x2	1725
§LSB1-750	65¼	36	27⅞	90,000	....	....	....	....	....	....	....	....	....	....	....	....
HSA2-1008	39¼	80¾	36¾	120,000	....	....	3	208/220	1	Copeland	10	Refrig.	Semi-Hermetic	3	2 3/16x2	1750
*LSBH5-1000	31½	59¼	53¾	120,000	....	....	....	....	....	....	....	....	....	....	....	....

Model No.	Condenser Type	Cooling Medium	Evaporator Face Area (Sq. Ft.)	Rows	Refrigerant Type	Charge (Lbs.)	Factory Charged?	Control Temp.	Damper	Air Filters No.	Type	Dimensions (In.)	Blowers In Evap. Unit?	No.	Nom. C.f.m.	R.p.m.	Net Weight	Water Usage Gpm/ton
§CB11-201-3	Tube In Tube	Water	1.96	3	F-22	2.81	Yes	Yes	No	....	....	....	Yes	1	800	475-647	....	1.56
§CB11-301-3	Tube In Tube	Water	2.94	3	F-22	3.62	Yes	Yes	No	....	....	....	Yes	1	1200	542-740	....	1.63
§CB11-501-3	Tube In Tube	Water	4.4	4	F-22	7.0	Yes	Yes	No	....	....	....	Yes	1	2000	633-863	....	1.64
*CHA2-201	Fin & Tube	Air	1.97	3	F-22	4.68	Yes	Yes	No	....	....	....	Yes	1	800	1075	....	....
*CHA2-301	Fin & Tube	Air	2.66	4	F-22	6.62	Yes	Yes	No	....	....	....	Yes	1	1200	680-900	....	....
HSA2-201	Fin & Tube	Air	....	....	F-22	12.0	Yes	Yes	No	....	....	....	....	....	....	....	....	....
§LS1-200	....	....	3.24	3	F-22	....	No	....	....	....	....	....	No	....	....	....	....	....
§LSB1-200	....	....	1.96	3	F-22	....	No	....	....	....	....	....	Yes	1	800	475-647	....	....
HSA3-301 & 303	Fin & Tube	Air	....	....	F-22	16.0	Yes	Yes	No	....	....	....	....	....	....	....	....	....
§LS1-300	....	....	3.24	3	F-22	....	No	....	....	....	....	....	No	....	....	....	....	....
§LSB1-300	....	....	2.94	3	F-22	....	No	....	....	....	....	....	Yes	1	1200	542-740	....	....
HSA3-501-3	Fin & Tube	Air	....	....	F-22	26	Yes	Yes	No	....	....	....	....	....	....	....	....	....
§LS1-500	....	....	4.83	4	F-22	....	No	....	....	....	....	....	No	....	....	....	....	....
§LSB1-500	....	....	4.43	4	F-22	....	No	....	....	....	....	....	Yes	1	2000	633-864	....	....
HSA2-753	Fin & Tube	Air	....	....	F-12	34	Yes	Yes	No	....	....	....	....	....	....	....	....	....
§LSB1-750	....	....	6.47	4	F-12	....	No	....	....	2	Permanent	16x25	Yes	1	3000	542-740	....	....
HSA2-1008	Fin & Tube	Air	....	....	F-22	48	Yes	Yes	No	....	....	....	....	....	....	....	....	....
*LSBH5-1000	....	....	9.37	4	F-22	....	No	....	....	2	Disposable	30x39	Yes	2	4000	650-755	....	....

§Upflow only. LS models also available in horizontal and down flow. *Horizontal flow only.

Luxaire—The C. A. Olsen Mfg. Co., Elyria, Ohio

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacities (B.t.u.h.) Cooling	Heating	Heating Type	Compressor Motor Phase	Volts	Compressor No.	Make	Hp.	Cooling Method	Type	Cylin.	Bore & Stroke (In.)	R.p.m.
§2-A-100, O-84	63½	36½	26	23,500	80-84,000	Gas/Oil	1	230	1	Westinghouse	2	Water	Serv. Hermetic	2	2x1½	1750
§3-A-140, O-84	66	44½	29	37,350	112,000	Gas/Oil	1—3	230/208/220	1	Westinghouse	3	Water	Serv. Hermetic	2	2x1½	1750
§5-A-140, O-112	68	51	50	62,900	112,000	Gas/Oil	1—3	230/208/220	1	York	5	Water	Serv. Hermetic	6	1¾x13/16	1720
§5-A-175, O-140	68	51	50	62,900	140,000	Gas/Oil	1—3	230/208/220	1	York	5	Water	Serv. Hermetic	6	1¾x13/16	1720

Model No.	Condenser Type	Cooling Medium	Evaporator Face Area (Sq. Ft.)	Rows	Refrigerant Type	Charge (Lbs.)	Factory Charged?	Control Temp.	Damper	Air Filters No.	Type	Dimensions (In.)	Blowers In Evap. Unit?	No.	Nom. C.f.m.	R.p.m.	Net Weight	Water Usage Gpm/ton
§2-A-100, O-84	Tube-In-Tube	Water†	2.43	2	F-12	2½	Yes	Yes	Yes	1	Disposable	16x25	Yes	1	800	850	714/810	1½
§3-A-140, O-84	Tube-In-Tube	Water†	3.47	2	F-22	4	Yes	Yes	Yes	1	Disposable	20x25	Yes	1	1200	850	900/962	1½
§5-A-140, O-112	Shell & Tube	Water†	5.93	3	F-22	....	Yes	Yes	No	2	Disposable	20x25	Yes	2	2000	850	1360/1488	1½
§5-A-175, O-140	Shell & Tube	Water†	5.93	3	F-22	....	Yes	Yes	No	2	Disposable	20x25	Yes	2	2000	850	1360/1480	1½

§Down flow only. All models available with add-on evaporator units, air cooled, 3 and 5-hp. water cooled. Two and 3-hp. units available in down flow. †Also available in air-cooled models at slightly less cooling capacity.

Marvair—Muncie Gear Works, Inc., Muncie, Ind.

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacities (B.t.u.h.) Cooling	Heating	Heating Type	Compressor Motor Phase	Volts	Compressor No.	Make	Hp.	Cooling Method	Type	Cylin.	Bore & Stroke (In.)	R.p.m.
A402Z	28	33⅜	44	24,600	....	....	1	220	....	Tecumseh	2	....	....	....	....	....
§A402Z-A-1	15⅜	22	22	....	....	....	....	....	....	....	....	....	....	....	....	....
A405Z	28	33⅜	44	37,400	....	....	1—3	220	....	Tecumseh	3	....	....	....	....	....
§A405Z-A-1	15⅜	26	26	....	....	....	....	....	....	....	....	....	....	....	....	....
A406Z	28	33⅜	44	60,800	....	....	1—3	220	....	Tecumseh	5	....	....	....	....	....
§A406Z-A-1	5⅜	24	26	....	....	....	....	....	....	....	....	....	....	....	....	....

Model No.	Condenser Type	Cooling Medium	Evaporator Face Area (Sq. Ft.)	Rows	Refrigerant Type	Charge (Lbs.)	Factory Charged?	Control Temp.	Damper	Air Filters No.	Type	Dimensions (In.)	Blowers In Evap. Unit?	No.	Nom. C.f.m.	R.p.m.	Net Weight	Water Usage Gpm/ton
A402Z	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
§A402Z-A-1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
A405Z	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
§A405Z-A-1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
A406Z	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
§A406Z-A-1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....

Mayflower—Mayflower Air-Conditioners, Inc., St. Paul

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacities (B.t.u.h.) Cooling	Heating	Heating Type	Compressor Motor Phase	Volts	Compressor No.	Make	Hp.	Cooling Method	Type	Cylin.	Bore & Stroke (In.)	R.p.m.
AAC-2	61½	27	28	24,000	....	....	1—3	230/220	....	....	....	....	....	....	....	....
AAC-3	61½	27	28	36,000	....	....	1—3	230/220	....	....	....	....	....	....	....	....
175-AH	18⅝	30⅛	38	19,250	....	....	1	230	....	....	....	....	....	....	....	....
200-AH	27	30⅛	48	21,200	....	....	1—3	230/220	....	....	....	....	....	....	....	....
WAC-2	61½	27	28	24,000	....	....	1—3	230/220	....	....	....	....	....	....	....	....
WAC-3	61½	27	28	36,000	....	....	1—3	230/220	....	....	....	....	....	....	....	....
WAC-5	61½	37	32	60,000	....	....	3	230	....	....	....	....	....	....	....	....

Model No.	Condenser Type	Cooling Medium	Evaporator Face Area (Sq. Ft.)	Rows	Refrigerant Type	Charge (Lbs.)	Factory Charged?	Control Temp.	Damper	Air Filters No.	Type	Dimensions (In.)	Blowers In Evap. Unit?	No.	Nom. C.f.m.	R.p.m.	Net Weight	Water Usage Gpm/ton
AAC-2	Fin & Tube	Air	1.75	4	F-22	6.75	Yes	Yes	Yes	1	....	20x25x1	Yes	....	800	600	495	....
AAC-3	Fin & Tube	Air	2.92	4	F-22	6.75	Yes	Yes	Yes	1	....	20x25x1	Yes	....	1200	700	532	....
175-AH	Fin & Tube	Air	1.78	4	F-22	4.37	Yes	Yes	....	2	....	9⅝x16½x½	Yes	....	750	1140	250	....
200-AH	Fin & Tube	Air	3.05	4	F-22	5.9	Yes	Yes	....	1	....	19x27x1	Yes	....	1200	1140	400	....
WAC-2	Tube In Tube	Water	1.75	4	F-22	2.69	Yes	Yes	Yes	1	....	20x25x1	Yes	....	800	600	351	1.5
WAC-3	Tube In Tube	Water	2.92	4	F-22	3.0	Yes	Yes	Yes	1	....	20x25x1	Yes	....	1200	700	410	1.5
WAC-5	Tube In Tube	Water	4.16	4	F-22	5.25	Yes	Yes	Yes	2	....	16x25x1	Yes	....	2000	640	503	1.5

McQuay—McQuay, Inc., Minneapolis

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacities (B.t.u.h.) Cooling	Heating	Heating Type	Compressor Motor Phase	Volts	Compressor No.	Make	Hp.	Cooling Method	Type	Cylin.	Bore & Stroke (In.)	R.p.m.
CU-2	35¼	28¼	27⅞	30,500	....	....	1	230	1	Tecumseh	2	Gas	Hermetic	....	....	....
*RE-2V	13¾	24⅜	22	27,200	....	....	....	....	....	....	....	....	....	....	....	....
CU-3	29⅝	33	33	32,800	....	....	1	230	1	Tecumseh	3	Gas	Hermetic	....	....	....
*RE-3V	16	24⅜	22	37,100	....	....	....	....	....	....	....	....	....	....	....	....
CU-5	35	37⅞	37⅞	60,000	....	....	1—3	230	1	Tecumseh	5	Gas	Hermetic	....	....	....
*RE-5V	19⅝	32⅝	27	63,300	....	....	....	....	....	....	....	....	....	....	....	....

Model No.	Condenser Type	Cooling Medium	Evaporator Face Area (Sq. Ft.)	Rows	Refrigerant Type	Charge (Lbs.)	Factory Charged?	Control Temp.	Damper	Air Filters No.	Type	Dimensions (In.)	Blowers In Evap. Unit?	No.	Nom. C.f.m.	R.p.m.	Net Weight	Water Usage Gpm/ton
CU-2	Fin Tube	Air	....	....	F-22	....	No	No	No	....	....	....	....	....	....	....	....	....
*RE-2V	....	....	2.22	3	F-12/22	....	No	No	No	....	....	....	....	....	....	....	....	....
CU-3	Fin Tube	Air	....	....	F-22	....	No	No	No	....	....	....	....	....	....	....	....	....
*RE-3V	....	....	2.78	3	F-12/22	....	No	No	No	....	....	....	....	....	....	....	....	....
CU-5	Fin & Tube	Air	....	....	F-22	....	No	No	No	....	....	....	....	....	....	....	....	....
*RE-5V	....	....	5.00	3	F-12/22	....	No	No	No	....	....	....	....	....	....	....	....	....

*Up or down flow. Horizontal flow units also available.

Miami-Air—Miami Products Co., Miami, Okla.

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacities (B.t.u.h.) Cooling	Heating	Heating Type	Compressor Motor Phase	Volts	Compressor No.	Make	Hp.	Cooling Method	Type	Cylin.	Bore & Stroke (In.)	R.p.m.
2 HP	26	25	28	23,300*	....	....	1	220	1	Bendix-West.	2	Air	....	....	....	....
Evap.	16	18	22	....	....	....	....	....	....	....	....	....	....	....	....	....
3 HP	31	25	28	33,600*	....	....	1—3	230/208/220	1	Tecumseh	3	Air	....	....	....	....
Evap.	16	18	22	....	....	....	....	....	....	....	....	....	....	....	....	....
5 HP	30	32	36	58,000*	....	....	1—3	230/208/220	1	Tecumseh	5	Air	....	....	....	....
	19	24	27	....	....	....	....	....	....	....	....	....	....	....	....	....

Model No.	Condenser Type	Cooling Medium	Evaporator Face Area (Sq. Ft.)	Rows	Refrigerant Type	Charge (Lbs.)	Factory Charged?	Control Temp.	Damper	Air Filters No.	Type	Dimensions (In.)	Blowers In Evap. Unit?	No.	Nom. C.f.m.	R.p.m.	Net Weight	Water Usage Gpm/ton
2 HP	Fin Tube†	Air	....	....	F-22	10	No	Yes	No	....	....	....	....	....	....	....	....	....
Evap.	....	....	2	3	....	....	....	....	....	....	....	....	....	....	....	....	....	....
3 HP	Fin Tube†	Air	....	....	F-22	14	No	Yes	No	....	....	....	....	....	....	....	....	....
Evap.	....	....	3	3	....	....	....	....	....	....	....	....	....	....	....	....	....	....
5 HP	Fin Tube†	Air	....	....	F-22	18	No	Yes	No	....	....	....	....	....	....	....	....	....
	....	....	5	3	....	....	....	....	....	....	....	....	....	....	....	....	....	....

*At 95° entering air. †Bee hive design.

Mitchell—Mitchell Mfg. Co., Chicago

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacities (B.t.u.h.) Cooling	Heating	Heating Type	Compressor Motor Phase	Volts	Compressor No.	Make	Hp.	Cooling Method	Type	Cylin.	Bore & Stroke (In.)	R.p.m.
RA200F	20¼	29	24⅝	22,000	....	....	1	230	1	Tecumseh	1¾	Gas	Hermetic	2	1⅝x1 1/16	1725
*RA200FA	11½	20⅞	20½	....	....	....	....	....	....	....	....	....	....	....	....	....
BC200F	16⅝	32¼	30	....	....	....	....	....	....	....	....	....	....	....	....	....
RA300F	26	38⅝	40½	35,500	....	....	1—3	230/220	1	Tecumseh	3	Gas	Hermetic	2	1⅝x1 1/16	1725
*RA300FA	14½	20⅞	20½	....	....	....	....	....	....	....	....	....	....	....	....	....
BC300F	16⅝	32¼	30	....	....	....	....	....	....	....	....	....	....	....	....	....
RA500F	30⅝	34¼	48⅛	57,700	....	....	1—3	230/220	2	Tecumseh	5	Gas	Hermetic	4	1⅝x1 1/16	1725
*RA500FA	18⅝	25⅝	24⅛	....	....	....	....	....	....	....	....	....	....	....	....	....
BC500F	22	38	30	....	....	....	....	....	....	....	....	....	....	....	....	....
TA400	24½	30	43	37,000	....	....	1	230	2	Tecumseh	4	Gas	Hermetic	4	1⅝x1 1/16	1725
QR200	44⅝	31¼	24	27,600	....	....	1—3	230/220	1	Tecumseh	2	Gas	Hermetic	2	1⅝x1 1/16	1725
C-200	44⅝	31¼	24	27,600	....	....	1—3	230/220	1	Tecumseh	2	Gas	Hermetic	2	1¾x1 7/16	1725
C-300	44⅝	31¼	24	30,400	....	....	1—3	230/220	1	Tecumseh	3	Gas	Hermetic	2	2x1.2	1725
C-500	48⅛	41	36½	63,600	....	....	1—3	230/220	2	Tecumseh	5	Gas	Hermetic	4	1¾x1 7/16	1725

Model No.	Condenser Type	Cooling Medium	Evaporator Face Area (Sq. Ft.)	Rows	Refrigerant Type	Charge (Lbs.)	Factory Charged?	Control Temp.	Damper	Air Filters No.	Type	Dimensions (In.)	Blowers In Evap. Unit?	No.	Nom. C.f.m.	R.p.m.	Net Weight	Water Usage Gpm/ton
RA200F	Fin & Tube	Air	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
*RA200FA	....	....	1.95	3	F-22	0.21	Yes	No	No	....	....	....	....	....	800	....	33	....
BC200F	....	....	2.14	3	F-22	0.5	Yes	Opt.	No	1	Disposable	27x16x1	Yes	1	800	1050	105	....
RA300F	Fin & Tube	Air	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
*RA300FA	....	....	3.2	3	F-22	0.21	Yes	No	No	....	....	....	....	....	1200	....	38	....
BC300F	....	....	2.5	4	F-22	0.5	Yes	Opt.	No	1	Disposable	27x16x1	Yes	1	1200	1050	115	....
RA500F	Fin & Tube	Air	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
*RA500FA	....	....	5.0	3	F-22	‡	Yes	No	No	....	....	....	....	....	2000	....	47	....
BC500F	....	....	4.5	3	F-22	0.5	Yes	Opt.	No	1	Disposable	20x16x1	Yes	....	2000	610	225	....
TA400	Fin & Tube	Air	2.5	4	F-22	3.5	Yes	Opt.	No	1	Disposable	....	Yes	2	1200	1100	280	....
QR200	Tube In Tube	Water	3.96	3	F-22	3.2	Yes	Opt.	No	1	Disposable	14⅝x12½x¾	Yes	1	600	1090	250	....
C-200	Tube In Tube	Water†	3.06	3	F-22	3.2	Yes	Opt.	No	1	Disposable	22¼x20x1	Yes	1	800	750	375	3.0
C-300	Tube In Tube	Water†	3.06	4	F-22	5.0	Yes	Opt.	No	1	Disposable	22¼x20x1	Yes	1	1200	750	390	4.5
C-500	Shell & Tube	Water†	4.45	3	F-22	6.6	Yes	Opt.	No	2	Disposable	16x20x1	Yes	2	2000	750	566	7.5

*Upflow and down flow. Horizontal flow also available. †Also available in air-cooled models at slightly less capacity. ‡Also available without precharge.

Moncrief—Henry Furnace Co., Medina, Ohio

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacities (B.t.u.h.) Cooling	Heating	Heating Type	Compressor Motor Phase	Volts	Compressor No.	Make	Hp.	Cooling Method	Type	Cylin.	Bore & Stroke (In.)	R.p.m.
§2-A-100, O-84	63½	36½	26	23,500	80-84,000	Gas/Oil	1	230	1	Westinghouse	2	Water	Serv. Hermetic	2	2x1½	1750
§3-A-140, O-84	66	44½	29	37,350	112,000	Gas/Oil	1—3	230/208/220	1	Westinghouse	3	Water	Serv. Hermetic	2	2x1½	1750
§5-A-140, O-112	68	51	50	62,900	112,000	Gas/Oil	1—3	230/208/220	1	York	5	Water	Serv. Hermetic	6	1¾x13/16	1720
§5-A-175, O-140	68	51	50	62,900	140,000	Gas/Oil	1—3	230/208/220	1	York	5	Water	Serv. Hermetic	6	1¾x13/16	1720

Model No.	Condenser Type	Cooling Medium	Evaporator Face Area (Sq. Ft.)	Rows	Refrigerant Type	Charge (Lbs.)	Factory Charged?	Control Temp.	Damper	Air Filters No.	Type	Dimensions (In.)	Blowers In Evap. Unit?	No.	Nom. C.f.m.	R.p.m.	Net Weight	Water Usage Gpm/ton
§2-A-100, O-84	Tube-In-Tube	Water†	2.43	2	F-12	2½	Yes	Yes	Yes	1	Disposable	16x25	Yes	1	800	850	714/810	1½
§3-A-140, O-84	Tube-In-Tube	Water†	3.47	2	F-22	3	Yes	Yes	Yes	1	Disposable	20x25	Yes	1	1200	850	900/962	1½
§5-A-140, O-112	Shell & Tube	Water†	5.93	3	F-22	....	Yes	Yes	No	2	Disposable	20x25	Yes	2	2000	850	1360/1488	1½
§5-A-175, O-140	Shell & Tube	Water†	5.93	3	F-22	....	Yes	Yes	No	2	Disposable	20x25	Yes	2	2000	850	1360/1480	1½

§Down flow only. All models available with add-on evaporator units, air cooled, 3 and 5-hp. water cooled. Two and 3-hp. units available in down flow. †Also available in air-cooled models at slightly less cooling capacity.

Mor-Sun—Morrison Steel Products, Inc., Buffalo

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacities (B.t.u.h.) Cooling	Heating	Heating Type	Compressor Motor Phase	Volts	Compressor No.	Make	Hp.	Cooling Method	Type	Cylin.	Bore & Stroke (In.)	R.p.m.
MC 200	68½	31¼	24	27,600	....	....	1	230	1	Tecumseh	2	Refrig.	Hermetic	2	1.75x1.2	1725
MC 300	68½	31¼	24	38,400	....	....	1—3	230	1	Tecumseh	3	Refrig.	Hermetic	2	2x1.2	1725
MC 500	68½	41¼	24	63,600	....	....	1—3	230	1	Tecumseh	5	Refrig.	Hermetic	4	1.75x1 7/16	1725
§MWR 200	60	29	23	27,600	....	....	1	230	1	Tecumseh	2	Refrig.	Hermetic	2	1.75x1.2	1725
§MWR 300	60	29	23	38,400	....	....	1—3	230	1	Tecumseh	3	Refrig.	Hermetic	2	2x1.2	1725
§MWR 500	72	40	25	63,600	....	....	1—3	230	1	Tecumseh	5	Refrig.	Hermetic	4	1.75x1 7/16	1725
MRA-200	20½*	29	34⅝	22,000	....	....	1	230	1	Tecumseh	2	Refrig.	Hermetic	2	1.75x1.2	1725
MBC-200	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
MRA-300	26*	40½	38⅝	35,500	....	....	1—3	230	1	Tecumseh	3	Refrig.	Hermetic	2	2x1.2	1725
MBC-300	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
MRA1500	29⅝*	34½	48⅛	60,000	....	....	1—3	230	1	Tecumseh	5	Refrig.	Hermetic	4	1.75x1 7/16	1725
MBC-500	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....

Model No.	Condenser Type	Cooling Medium	Evaporator Face Area (Sq. Ft.)	Rows	Refrigerant Type	Charge (Lbs.)	Factory Charged?	Control Temp.	Damper	Air Filters No.	Type	Dimensions (In.)	Blowers In Evap. Unit?	No.	Nom. C.f.m.	R.p.m.	Net Weight	Water Usage Gpm/ton
MC 200	Tube In Tube	Water	3.06	3	R-22	4.75	Yes	Yes	No	1	Disposable	20x22x1	Choice	1	800	....	440	3.0
MC 300	Tube In Tube	Water	3.16	4	R-22	5.75	Yes	Yes	No	1	Disposable	20x22x1	Choice	1	1200	....	465	4.5
MC 500	Tube In Tube	Water	4.82	4	R-22	12.0	Yes	Yes	No	2	Disposable	22x16¼x1	Choice	2	2000	....	680	7.5
§MWR 200	Tube In Tube	Water	3.06	3	R-22	4.75	Yes	Yes	No	1	Disposable	20x22x1	Yes	1	800	....	415	3.0
§MWR 300	Tube In Tube	Water	3.06	4	R-22	5.75	Yes	Yes	No	1	Disposable	20x22x1	Yes	1	1200	....	450	4.5
§MWR 500	Tube In Tube	Water	4.82	4	R-22	12.0	Yes	Yes	No	2	Disposable	22x16¼x1	Yes	2	2000	....	750	7.5
MRA-200	....	Air	1.95/2.14	3	R-22	....	Yes	Yes	No	....	....	....	....	....	....	....	....	....
MBC-200	....	Air	2.14	3	R-22	....	Yes	Yes	No	1	Disposable	27x16x1	Yes	1	800	1050	....	....
MRA-300	....	Air	3.2/3.0	3	R-22	....	Yes	Yes	No	....	....	....	....	....	....	....	....	....
MBC-300	....	Air	2.57	4	R-22	....	Yes	Yes	No	1	Disposable	27x16x1	Yes	1	1200	1050	....	....
MRA1500	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
MBC-500	....	Air	4.53	3	R-22	....	Yes	Yes	No	2	Disposable	20x16x1	Yes	1	2000	1725	....	....

§Upflow only. MC models universal application. MC models also available air cooled with slightly less capacity and with holding charge. *Condensing unit dimensions only. MRA units have vertical and A coils.

Residential

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacities (B.t.u.h.) Cooling	Heating	Heating Type	Compressor Motor Phase	Volts	Compressor No.	Make	Hp.	Cooling Method	Type	Cylin.	Bore & Stroke (In.)	R.p.m.
Mueller Climatrol—Mueller Climatrol, Milwaukee																
§903-3	66⅝	30¼	27⅝	36,000	....	....	1—3	230/208/220	1	Worthington	3	Suction	Semi-Hermetic	3	1 15/16x1 7/16	1725
§903-5	66	34⅛	38	60,000	....	....	1—3	230/208/220	1	Worthington	5	Suction	Semi-Hermetic	3	1 15/16x1 7/16	1725
§906-2	62 or 67	34⅛	36⅝	26,050	....	....	1—3	230/208/220	1	Tecumseh	2	Suction	Hermetic	2	....	....
§906-3	62 or 67	34⅛	36⅝	36,000	....	....	1—3	230/208/220	1	Worthington	3	Suction	Semi-Hermetic	3	1 15/16x1 7/16	1725
§906-5	62 or 67	34⅛	45	60,000	....	....	1—3	230/208/220	1	Worthington	5	Suction	Semi-Hermetic	3	1 15/16x1 7/16	1725
§923-11V2	60⅝	20¼	27⅝	26,050	....	....	1	230	1	Tecumseh	2	Suction	Hermetic	2	....	....
§Upflow only. *Also available air cooled with type 907 remote condenser. Series 900, 912, and 914 coil packages available in 2, 3, and 5 ton (7½ ton in 900), air or water cooled.																
Nat—The Nat Corp., Kansas City, Mo.																
300	36	44	42	38,200	....	....	....	....	1	Copeland	3	....	....	....	....	....
500	36	44	42	57,200	....	....	....	....	1	Copeland	5	....	....	....	....	....
Niagara—The Forest City Foundries Co., Cleveland																
1-HA261	59⅛	22	22	24,000	....	....	1—3	230	....	Tecumseh	2	Suction	Hermetic	2	....	1725
1-HA361	59⅛	22	22	36,000	....	....	1—3	230	....	Tecumseh	3	Suction	Hermetic	2	....	1725
1-HA561	66½	26	26	60,000	....	....	1—3	230	....	Tecumseh	5	Suction	Hermetic	4	....	1725
1-H261	59⅛	22	22	24,000	....	....	1—3	230	....	Tecumseh	2	Suction	Hermetic	2	....	1725
1-H361	59⅛	22	22	36,000	....	....	1—3	230	....	Tecumseh	3	Suction	Hermetic	2	....	1725
1-H461	66½	26	26	48,000	....	....	1—3	230	....	Tecumseh	4	Suction	Hermetic	2	....	1725
1-H661	66½	26	26	72,000	....	....	1—3	230	....	Tecumseh	5	Suction	Hermetic	4	....	1725
Available in upflow or down flow. Horizontal flow available in 2, 3, and 5T models.																
Patten—J. V. Patten Co., Sycamore, Ill.																
S-261	56	22	22	24,000	62-112,000	Oil-Gas	1	230/208	1	Tecumseh	1½	Water	Hermetic	2	....	1725
S-361	56	22	22	36,000	62-156,000	Oil-Gas	1—3	230/208	1	Tecumseh	3	Water	Hermetic	2	....	1725
S-461	62	26	26	48,000	62-224,000	Oil-Gas	1—3	230/208	1	Tecumseh	3	Water	Hermetic	2	....	1725
S-661	62	26	26	72,000	62-224,000	Oil-Gas	1—3	230/208	1	Tecumseh	5	Water	Hermetic	4	....	1725
HAR-170	56	22	22	19,000	62-112,000	Oil-Gas	1	230/208	1	Tecumseh	1¾	Air	Hermetic	2	....	1725
HAR-31	56	22	22	33,200	62-156,000	Oil-Gas	1—3	230/208	1	Tecumseh	3	Air	Hermetic	2	....	1725
HAR-51	56	26	26	56,000	62-224,000	Oil-Gas	1—3	230/208	1	Tecumseh	5	Air	Hermetic	2	....	1725
HAS17	17⅞	26½	32	19,000	62-112,000	Oil-Gas	1	230	1	Tecumseh	1¾	Air	Hermetic	2	....	1725
HAS30	24	29¾	43½	22,000	62-156,000	Oil-Gas	1	230	1	Bendix-West.	2	Air	Hermetic	2	....	1725
HAS31	24	29¾	43½	36,000	62-224,000	Oil-Gas	1	230	2	Tecumseh	(2) 1½	Air	Hermetic	2 ea.	....	1725
"S" models up or down flow, HAR universal application, HAS horizontal only.																
Payne—The Payne Co., Monrovia, Calif.																
20RAC	26⅜	32⅛	35⅛	....	....	....	1—3	208/220/230	1	Payne	....	Refrig.	Semi-Hermetic	2	2x1.4	1750
30VAF	17	20	23⅛	27,800	....	....	....	....	....	....	....	....	....	....	....	....
30BAC	24⅛	30⅛	26⅞	25,800	....	....	....	....	....	....	....	....	....	....	....	....
40RAC	26⅜	36	43	39,200	....	....	1—3	208/220/230	1	Payne	....	Refrig.	Semi-Hermetic	4	2x1⅛	1750
40VAF	19⅜	25⅛	22⅞	....	....	....	....	....	....	....	....	....	....	....	....	....
40BAC	26¼	40⅝	28¼	....	....	....	....	....	....	....	....	....	....	....	....	....
50RAC	26⅜	36	45⅛	49,650	....	....	1—3	208/220/230	1	Payne	....	Refrig.	Semi-Hermetic	4	2x1 7/16	1750
50VAF	22⅜	30⅛	23⅞	....	....	....	....	....	....	....	....	....	....	....	....	....
50BAC	26¼	46⅝	30¼	....	....	....	....	....	....	....	....	....	....	....	....	....
75RAC	31½	60	46⅛	74,600	....	....	3	208/230	1	Payne	....	Refrig.	Semi-Hermetic	6	2x1⅛	1750
75BAC	30	42	40	....	....	....	....	....	....	....	....	....	....	....	....	....
VAF models down flow and upflow. BAC models universal application except 75BAC horizontal flow. HAF horizontal flow units also available.																
Peerless—Peerless Corp., Indianapolis																
RA-213-1	27	34¼	34¼	20,500	....	....	1	230	1	Tecumseh	1¾	Refrig.	Sealed	2	1⅝x1 1/64	1725
RA-253-1	27	34¼	34¼	24,000	....	....	1	230	1	Tecumseh	2	Refrig.	Sealed	2	1⅝x1.2	1725
RA-373-1	27	37¼	37¼	35,500	....	....	1—3	230	1	Tecumseh	3	Refrig.	Sealed	2	2x1.2	1725
RA-503-1	27	37¼	37¼	59,500	....	....	1—3	230	1	Tecumseh	5	Refrig.	Sealed	4	1⅝x1.2	1725
Available in both upflow and horizontal flow.																
Perfection—Perfection Industries, Div. of Hupp Corp., Cleveland																
PAS17	16⅝	26½	33⅛	18,000	....	....	1	230	1	Tecumseh	2	Gas	Hermetic	2	1 5/6x1 1/64	1725
PAS21	23⅝	29	43⅛	22,000	....	....	1	230	1	Bendix-West.	2	Gas	Hermetic	2	....	1725
PAS31	23⅝	29	43⅛	36,000	....	....	1	230	2	Tecumseh	3½	Gas	Hermetic	2	1 5/6x1 1/64	1725
1H261	59⅛	22	22	24,000	....	....	1	115/230	1	Tecumseh	1¾	Gas	Hermetic	2	....	1725
1H361	59½	22	22	36,000	....	....	1—3	115/230/08/220	1	Tecumseh	2	Gas	Hermetic	2	....	1725
1H461	66½	26	26	48,000	....	....	1—3	115/230/08/220	1	Tecumseh	3	Gas	Hermetic	3	1.2x2	1725
1H661	66½	26	26	72,000	....	....	1—3	115/230/08/220	1	Tecumseh	5	Gas	Hermetic	4	1⅝x1 7/16	1725
1PAR170	40⅝	26½	26½	18,200	....	....	1	230	1	Tecumseh	1¾	Gas	Hermetic	2	1 5/6x1 1/64	1725
§PEU170	15	20	16⅞	....	....	....	....	....	....	....	....	....	....	....	....	....
§PEV170	60	20	26⅝	....	....	....	....	....	....	....	....	....	....	....	....	....
PAR31	45⅝	30⅝	30⅝	28,200	....	....	1—3	230/208/220	1	Tecumseh	3	Gas	Hermetic	2	1.2x1	1725
§PEU30	15	20	16⅞	....	....	....	....	....	....	....	....	....	....	....	....	....
§PEV31	60	20	26⅝	....	....	....	....	....	....	....	....	....	....	....	....	....
PAR51	48⅝	36⅝	36⅝	56,000	....	....	1—3	230/208/220	1	Tecumseh	5	Gas	Hermetic	4	1⅝x1 7/16	1725
§PEU50	18⅝	28⅝	19⅝	....	....	....	....	....	....	....	....	....	....	....	....	....
§PEV51	60	27	33	....	....	....	....	....	....	....	....	....	....	....	....	....
PA31-3C	27	30⅝	42¾	36,000	....	....	1—3	230	1	Tecumseh	....	Gas	Hermetic	2	1.2x2	1725
§PEV3C	11½	25	25	....	....	....	....	....	1	Tecumseh	....	Gas	Hermetic	....	....	1725
PA51-3C	27	30⅝	66¾	60,000	....	....	1—3	230	1	Tecumseh	....	Gas	Hermetic	4	1⅝x1 7/16	1725
§PEV5C	19	25	25	....	....	....	....	....	1	Tecumseh	....	Gas	Hermetic	....	....	1725
Permaglas—A. O. Smith Corp., Kankakee, Ill.																
100-24-W	55	40	25	24,780	80,000	Gas	1—3	230/208/220	1	Tecumseh	2	Water	Hermetic	2	1.75x1.2	1725
100-36-W	55	40	25	38,650	80,000	Gas	1—3	230/208/220	1	Tecumseh	3	Water	Hermetic	2	2x1.2	1725
150-36-W	58	51	31	38,650	120,000	Gas	1—3	230/208/220	1	Tecumseh	3	Water	Hermetic	2	2x1.2	1725
150-60-W	58	51	31	65,800	120,000	Gas	1—3	230/208/220	1	Tecumseh	5	Water	Hermetic	4	1.75x1.44	1725
100-24-ABC	55	40	25	22,500	80,000	Gas	1—3	230/208/220	1	Tecumseh	2	Air	Hermetic	2	1.75x1.2	1725
100-36-ABC	55	40	25	35,300	80,000	Gas	1—3	230/208/220	1	Tecumseh	3	Air	Hermetic	2	2.0x1.2	1725
150-60-ABC	58	51	31	60,000	120,000	Gas	1—3	230/208/220	1	Tecumseh	5	Air	Hermetic	4	1.75x1.44	1725
75-24-ABC	65	46	31	22,500	84,000	Oil	1—3	230/208/220	1	Tecumseh	2	Air & Water	Hermetic	2	1.75x1.2	1725
75-36-ABC	65	46	31	35,300	84,000	Oil	1—3	230/208/220	1	Tecumseh	3	Air & Water	Hermetic	2	2.0x1.2	1725
115-36-ABC	67	51	40	35,300	129,000	Oil	1—3	230/208/220	1	Tecumseh	3	Air & Water	Hermetic	2	2.0x1.2	1725
115-60-ABC	67	51	40	60,000	129,000	Oil	1—3	230/208/220	1	Tecumseh	5	Air & Water	Hermetic	4	1.75x1.44	1725
All model numbers preceded by YAC or YACO (oil).																
Philco—Philco Corp., Philadelphia																
200-R	17⅝	28	37½	18,300	....	....	1	230	1	Tecumseh	2	Refrig.	Hermetic	2	1⅝x1 1/64	1725
Horizontal flow. *Available with optional duct kit. †At .20 in. water (static).																
RCA Whirlpool—Whirlpool-Seeger Corp., St. Joseph, Mich.																
RS-7200-3	23	29⅞	32¼	17,500	....	....	1	230	1	Tecumseh	2	Refrig.	Hermetic	2	....	1725
RA-7200-3	26⅞	33⅝	26⅝	19,500	....	....	1	230	1	Tecumseh	2	Refrig.	Hermetic	2	....	1725
Evap.	27½	24½	37¼	....	....	....	....	....	....	....	....	....	....	....	....	....
RA-7300	29½	35⅝	30⅞	33,300	....	....	1—3	230/220	1	Tecumseh	3	Refrig.	Hermetic	2	....	1725
Evap.	27½	24½	37¼	....	....	....	....	....	....	....	....	....	....	....	....	....
RA-7500	37½	45⅝	31⅝	57,500	....	....	1	230	1	Tecumseh	5	Refrig.	Hermetic	4	....	1725
Evap.	32⅛	39¼	42	....	....	....	....	....	....	....	....	....	....	....	....	....
*Total shipping weight. Evaporator section includes both supply and return air plenum.																
Rheemaire—Rheem Mfg. Co., Chicago																
3180E-200	22⅛	45⅛	17⅛	22,200	....	....	1	230	1	....	1	....	....	....	....	....
Evap.	15½	19⅛	....	....	....	....	....	....	....	....	....	....	....	....	....	....
3180E-300	22⅛	45⅛	17⅛	39,600	....	....	1	230	1	....	2	....	....	....	....	....
Evap.	14¾	19⅛	....	....	....	....	....	....	....	....	....	....	....	....	....	....
*Shipping weight. Upflow units. Also available down and horizontal flow.																
Round Oak—Round Oak Co., Dogawiac, Mich.																
RA-213-1	27	34¼	34¼	20,500	....	....	1	230	1	Tecumseh	1¾	Refrig.	Sealed	2	1⅝x1 1/64	1725
RA-253-1	27	34¼	34¼	24,000	....	....	1	230	1	Tecumseh	2	Refrig.	Sealed	2	1⅝x1.2	1725
RA-373-1	27	37¼	37¼	35,500	....	....	1—3	230	1	Tecumseh	3	Refrig.	Sealed	2	2x1.2	1725
RA-503-1	27	37¼	37¼	59,500	....	....	1—3	230	1	Tecumseh	5	Refrig.	Sealed	4	1⅝x1.2	1725
Available in both upflow and horizontal flow.																

Residential

Model No.	Condenser Type	Cooling Medium	Evaporator Face Area (Sq. Ft.)	Rows	Refrigerant Type	Charge (Lbs.)	Factory Charged?	Control Temp.	Damper	Air Filters No.	Type	Dimensions (In.)	Blowers In Evap. Unit?	No.	Nom. C.f.m.	R.p.m.	Net Weight	Water Usage Gpm/ton
Mueller Climatrol—Mueller Climatrol, Milwaukee																		
§903-3	Shell & Tube	Water*	3.2	3	R-22	6½	Yes	Yes	No	....	....	....	Opt.	1	1200	1750	375	1.2
§903-5	Shell & Tube	Water*	4.5	4	R-22	8½	Yes	Yes	No	....	....	....	Opt.	1	2000	1750	740	1.14
§906-2	Co-axial	Water*	2.2	3	R-22	3.4	Yes	Yes	No	....	....	....	Yes	1	800	1750	420	1.5
§906-3	Shell & Coil	Water*	3.2	3	R-22	6½	Yes	Yes	No	....	....	....	Yes	1	1200	1750	440	1.2
§906-5	Shell & Coil	Water*	4.5	4	R-22	8½	Yes	Yes	No	....	....	....	Yes	1	2000	1750	490	1.14
§923-11V2	Co-axial	Water	2.2	3	R-22	3.4	Yes	Yes	No	....	....	....	....	....	....	....	....	....
Nat—The Nat Corp., Kansas City, Mo.																		
300	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
500	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Niagara—The Forest City Foundries Co., Cleveland																		
1-HA261	....	Air	2.25	3	F-22	6½	Yes	....	....	1	Disposable	18x18	Yes	1	900	....	730	....
1-HA361	....	Air	2.25	4	F-22	7½	Yes	....	....	1	Disposable	18x18	Yes	1	900	....	870	....
1-HA561	....	Air	3.5	5	F-22	10	Yes	....	....	1	Disposable	22x22	Yes	1	900	....	940	....
1-H261	....	Water	2.25	3	F-22	4½	Yes	....	....	1	Disposable	18x18	Yes	1	900	....	375	180
1-H361	....	Water	2.25	4	F-22	5½	Yes	....	....	1	Disposable	18x18	Yes	1	1350	....	395	270
1-H461	....	Water	3.05	5	F-22	6½	Yes	....	....	1	Disposable	22x22	Yes	1	1800	....	475	360
1-H661	....	Water	3.50	6	F-22	8½	Yes	....	....	1	Disposable	22x22	Yes	1	2400	....	545	540
Patten—J. V. Patten Co., Sycamore, Ill.																		
S-261	Shell & Tube	Water	2.25	2	F-22	4½	Yes	Yes	Yes	1	Disposable	18x18x1	Yes	1	900	1000	375	....
S-361	Shell & Tube	Water	2.25	4	F-22	5½	Yes	Yes	Yes	1	Disposable	18x18x1	Yes	1	1350	1050	395	....
S-461	Shell & Tube	Water	3.05	5	F-22	6½	Yes	Yes	Yes	1	Disposable	22x22x1	Yes	1	1800	900	475	....
S-661	Shell & Tube	Water	3.50	6	F-22	8½	Yes	Yes	Yes	1	Disposable	22x22x1	Yes	1	2400	1000	545	....
HAR-170	Fin & Tube	Air	2.33	2	F-22	6½	Yes	Yes	Yes	1	Disposable	18x18x1	Yes	1	800	....	....	....
HAR-31	Fin & Tube	Air	2.71	3	F-22	7½	Yes	Yes	Yes	1	Disposable	18x18x1	Yes	1	1300	....	....	....
HAR-51	Fin & Tube	Air	4.12	3	F-22	10	Yes	Yes	Yes	1	Disposable	22x22x1	Yes	1	2000	....	....	....
HAS17	Fin & Tube	Air	1.17	4	....	....	Yes	Yes	No	1	Permanent	....	Yes	1	500	....	....	....
HAS30	Fin & Tube	Air	1.50	3	....	....	Yes	Yes	No	1	Permanent	....	Yes	1	800	....	....	....
HAS31	Fin & Tube	Air	2.00	4	....	....	Yes	Yes	No	1	Permanent	....	Yes	1	1300	....	....	....
Payne—The Payne Co., Monrovia, Calif.																		
20RAC	Fin & Tube	Air	....	....	C-7	10½	Yes	Yes	No	....	....	....	....	1	2000	....	480	....
30VAF	....	....	2.67	3	C-7	....	....	....	....	....	....	....	No	....	....	....	45	....
30BAC	....	....	2.80	3	C-7	....	....	....	....	1	Disposable	20x25x1	Yes	1	800-1050	....	125	....
40RAC	Fin	Air	....	....	F-12	15¼	Yes	Yes	No	....	....	....	....	1	3000	....	560	....
40VAF	....	....	3.65	3	F-12	....	....	....	....	....	....	....	No	....	....	....	75	....
40BAC	....	....	3.70	3	F-12	....	....	....	....	2	Disposable	16x20x1	Yes	1	1000-1400	560-760	200	....
50RAC	Fin	Air	....	....	C-7	18	Yes	Yes	No	....	....	....	....	1	3300	....	585	....
50VAF	....	....	4.50	3	C-7	....	....	....	....	....	....	....	No	....	....	....	100	....
50BAC	....	....	4.5	3	C-7	....	....	....	....	2	Disposable	20x25x1	Yes	1	1500-2000	440-650	250	....
75RAC	Fin	Air	....	....	C-7	26	Yes	Yes	No	....	....	....	....	1	....	....	750	....
75BAC	....	....	5.0	3	C-7	....	....	....	....	2	Permanent	....	Yes	1	2250-2750	535-750	410	....
Peerless—Peerless Corp., Indianapolis																		
RA-213-1	....	Air	7.8	2	F-22	....	Yes	Yes	No	....	....	....	....	....	....	....	....	....
RA-253-1	....	Air	7.8	2	F-22	....	Yes	Yes	No	1	Disposable	16x20x1	Yes	1	800	....	....	....
RA-373-1	....	Air	7.8	3	F-22	....	Yes	Yes	No	1	Disposable	16x20x1	Yes	1	1200	....	....	....
RA-503-1	....	Air	9.2	3	F-22	....	Yes	Yes	No	1	Disposable	20x20x1	Yes	1	2000	....	....	....
Perfection—Perfection Industries, Div. of Hupp Corp., Cleveland																		
PAS17	Finned Tube	Air	1.07	4	F-22	2.3	Yes	Yes	No	1	Disposable	....	Yes	1	500	1550	255	....
PAS21	Finned Tube	Air	1.23	3	F-22	2.9	Yes	Yes	No	1	Disposable	....	Yes	1	800	1075	320	....
PAS31	Finned Tube	Air	1.65	4	F-22	6.0	Yes	Yes	No	1	Disposable	....	Yes	1	1200	1075	450	....
1H261	Tube In Tube	Water	2.25	3	F-22	4.5	Yes	Yes	No	1	Disposable	18x18x⅞	Yes	1	900	750	375	1.5
1H361	Tube In Tube	Water	2.25	4	F-22	5.5	Yes	Yes	No	1	Disposable	18x18x⅞	Yes	1	1350	880	395	1.5
1H461	Tube In Tube	Water	3.05	5	F-22	6.5	Yes	Yes	No	1	Disposable	22x22x⅞	Yes	1	1800	925	475	1.5
1H661	Tube In Tube	Water	3.50	6	F-22	8.5	Yes	Yes	No	1	Disposable	22x22x⅞	Yes	1	2400	800	545	1.5
1PAR170	Fin & Tube	Air	....	....	F-22	3.25	Yes	Yes	No	1	Disposable	....	....	....	....	950	249	....
§PEU170	....	....	2.33	2	F-22	....	Yes	....	....	1	Disposable	....	....	....	....	....	28	....
§PEV170	....	....	2.29	2	F-22	....	Yes	....	No	1	Disposable	....	Yes	1	700	600	120	....
PAR31	Fin & Tube	Air	....	....	F-22	7.75	Yes	Yes	No	1	Disposable	....	....	....	....	850	263	....
§PEU30	....	....	2.71	3	F-22	....	Yes	....	....	1	Disposable	....	....	....	....	....	33	....
§PEV31	....	....	2.86	3	F-22	....	Yes	....	No	1	Disposable	....	Yes	1	1200	650	144	....
PAR51	Fin & Tube	Air	....	....	F-22	11.5	Yes	Yes	No	1	Disposable	....	....	....	....	645	528	....
§PEU50	....	....	4.12	3	F-22	....	Yes	....	....	1	Disposable	....	....	....	....	....	46	....
§PEV51	....	....	....	....	F-22	....	Yes	....	No	1	Disposable	....	Yes	1	2000	650	188	....
PA31-3C	Finned Tube	Air	....	....	F-22	8.25	Yes	Yes	No	1	....	....	....	....	....	....	440	....
§PEV3C	....	....	2.5	4	F-22	....	Yes	....	No	1	....	....	....	....	....	....	75	....
PA51-3C	Finned Tube	Air	....	....	F-22	12.0	Yes	Yes	No	1	Disposable	....	....	....	....	....	690	....
§PEV5C	Finned Tube	Air	5.2	4	F-22	....	Yes	....	No	1	Disposable	....	....	....	....	....	110	....
Permaglas—A. O. Smith Corp., Kankakee, Ill.																		
100-24-W	Counterflow	Water	2.04	4	F-22	2.69	Yes	Yes	No	2	Disposable	15x20	Yes	1	800	....	....	1.5
100-36-W	Counterflow	Water	2.92	4	F-22	2.94	Yes	Yes	No	2	Disposable	15x20	Yes	1	1200	....	....	1.5
150-36-W	Counterflow	Water	2.92	4	F-22	2.94	Yes	Yes	No	2	Disposable	20x25	Yes	1	1200	....	....	1.5
150-60-W	Counterflow	Water	4.29	4	F-22	5.25	Yes	Yes	No	2	Disposable	20x25	Yes	1	2000	....	....	1.5
100-24-ABC	Finned	Air	2.04	4	F-22	7.14	Yes	Yes	No	2	Disposable	15x20	Yes	1	800	....	....	....
100-36-ABC	Finned	Air	2.92	4	F-22	7.14	Yes	Yes	No	2	Disposable	15x20	Yes	1	1200	....	....	....
150-60-ABC	Finned	Air	4.20	4	F-22	12.5	Yes	Yes	No	2	Disposable	20x25	Yes	1	2000	....	....	....
75-24-ABC	Finned	Air	2.04	4	F-22	7.14	Yes	Yes	No	2	Disposable	15x20	Yes	1	800	....	....	....
75-36-ABC	Finned	Air	2.92	4	F-22	7.14	Yes	Yes	No	2	Disposable	15x20	Yes	1	1200	....	....	....
115-36-ABC	Finned	Air	2.92	4	F-22	7.14	Yes	Yes	No	2	Disposable	20x25	Yes	1	1200	....	....	....
115-60-ABC	Finned	Air	4.30	4	F-22	12.5	Yes	Yes	No	2	Disposable	20x25	Yes	1	2000	....	....	....
Philco—Philco Corp., Philadelphia																		
200-R	Finned	Air	24"x8¾"	4	F-22	3.7	Yes	Yes	No	1	Permanent*	½x11¾x23¾*	Yes	2	615†	1700	206	....
RCA Whirlpool—Whirlpool-Seeger Corp., St. Joseph, Mich.																		
RS-7200-3	Fin & Tube	Air	1.87	3	F-22	2.25	Yes	Yes	....	2	Disposable	12x24x1	Yes	1	645	1100	225*	....
RA-7200-3	Fin & Tube	Air	....	....	F-22	2.75	No	Yes	....	....	....	....	Yes	1	1700	820	432*	....
Evap.	....	....	2.1	3	....	....	No	....	....	2	Disposable	12x24x1	Yes	1	1015	1070	....	....
RA-7300	Fin & Tube	Air	....	....	F-22	4.88	No	Yes	....	....	....	....	Yes	1	2500	710	536*	....
Evap.	....	....	2.54	4	....	....	No	....	....	2	Disposable	12x24x1	Yes	1	1200	1070	....	....
RA-7500	Fin & Tube	Air	....	....	F-22	9.5	No	Yes	....	....	....	....	Yes	1	4300	665	700*	....
Evap.	....	....	4.12	4	....	....	No	....	....	2	Disposable	12x36x1	Yes	1	2000	845	....	....
Rheemaire—Rheem Mfg. Co., Chicago																		
3180E-200	Fin & Tube	Air	....	....	F-22	3# 15	Yes	....	....	....	....	....	....	....	....	....	238*	....
Evap.	....	....	2.11	4	....	....	....	Yes	....	....	....	....	....	....	....	....	....	....
3180E-300	Fin & Tube	Air	....	....	F-22	4# 13	Yes	....	....	....	....	....	....	....	....	....	268*	....
Evap.	....	....	2.5	4	....	....	....	Yes	....	....	....	....	....	....	....	....	....	....
Round Oak—Round Oak Co., Dogawiac, Mich.																		
RA-213-1	....	Air	7.8	2	F-22	....	Yes	Yes	No	....	....	....	....	....	....	....	....	....
RA-253-1	....	Air	7.8	2	F-22	....	Yes	Yes	No	1	Disposable	16x20x1	Yes	1	800	....	....	....
RA-373-1	....	Air	7.8	3	F-22	....	Yes	Yes	No	1	Disposable	16x20x1	Yes	1	1200	....	....	....
RA-503-1	....	Air	9.2	3	F-22	....	Yes	Yes	No	1	Disposable	20x20x1	Yes	1	2000	....	....	....

Residential

Shipley Homeaire—York-Shipley, Inc., York, Pa.

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacities (B.t.u.h.) Cooling	Heating	Heating Type	Compressor Motor Phase	Volts	Compressor No.	Make	Hp.	Cooling Method	Type	Cylin.	Bore & Stroke (In.)	R.p.m.
ACR7-20C	22⅝	35	25½	24,000			1	230	1	Tecumseh	2	Air	Hermetic	2	1⅝x1.2	1725
ACR7-30C	24⅛	42	30	33,000			1	230	1	Tecumseh	3	Air	Hermetic	2	2x1.2	1725
ACR7-50C	41⅛	40	41	58,000			1—3	230	1	Tecumseh	5	Air	Hermetic	4	1⅝x1 7/16	1725

Available in horizontal, upflow, and downflow.

Model No.	Condenser Type	Cooling Medium	Evaporator Face Area (Sq. Ft.)	Rows	Refrigerant Type	Charge (Lbs.)	Factory Charged?	Control Temp.	Damper	Air Filters No.	Type	Dimensions (In.)	Blowers In Evap. Unit?	No.	Nom. C.f.m.	R.p.m.	Net Weight	Water Usage Gpm/ton
ACR7-20C		Air	3.41	4	F-22	7	Yes	Yes	No	1	Disposable	16x25x1	Yes	1	800	1050	90	
ACR7-30C		Air	4.5	4	F-22	10	Yes	Yes	No	1	Disposable	20x25x1	Yes	1	1050	1050	105	
ACR7-50C		Air	9.0	4	F-22	20	Yes	Yes	No	2	Disposable	16x25x1	Yes	1	2000	520-640	236	

Stewart-Warner—Stewart-Warner Corp., Heating & Air Conditioning Div., Lebanon, Ind.

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacities (B.t.u.h.) Cooling	Heating	Heating Type	Compressor Motor Phase	Volts	Compressor No.	Make	Hp.	Cooling Method	Type	Cylin.	Bore & Stroke (In.)	R.p.m.
RC-W-A-2	22	42½	30⅝	25,500	80,000 up	Gas-Oil	1	230	1	Tecumseh	2	Gas	Hermetic	2	1⅝x1.2	1725
EC-UD-2-A-2	16	30⅜	26⅛													
RC-W-A-3	22	42½	30⅝	36,500	80,000 up	Gas-Oil	1—3	230/208/220	1	Tecumseh	3	Gas	Hermetic	2	2x1.2	1725
EC-UD-2-A-3	16	30⅜	26⅛													
RC-A-M-2	22	42½	30⅝	22,500	80,000 up	Gas-Oil	1	230	1	Tecumseh	2	Gas	Hermetic	2	1⅝x1.2	1725
EC-UD-2-M-2	16	30⅜	26⅛													
RC-A-M-3	22	42½	30⅝	33,000	80,000 up	Gas-Oil	1—3	230/208/220	1	Tecumseh	3	Gas	Hermetic	2	2x1.2	1725
EC-UD-2-M-3	16	30⅜	26⅛													
RC-W-A-5	29¼	55⅝	39⅝	62,000	110,000 up	Gas-Oil	1—3	230/208/220	1	Tecumseh	5	Gas	Hermetic	4	1⅝x1 7/16	1725
EC-UD-2-A-5	16	30⅜	26⅛													

Model No.	Condenser Type	Cooling Medium	Evaporator Face Area (Sq. Ft.)	Rows	Refrigerant Type	Charge (Lbs.)	Factory Charged?	Control Temp.	Damper	Air Filters No.	Type	Dimensions (In.)	Blowers In Evap. Unit?	No.	Nom. C.f.m.	R.p.m.	Net Weight	Water Usage Gpm/ton
RC-W-A-2	Co-Axial	Water				10	Yes	Yes	No									
EC-UD-2-A-2			3.21	2														
RC-W-A-3	Co-Axial	Water				10	Yes	Yes	No									
EC-UD-2-A-3			3.21	3														
RC-A-M-2	Fin & Tube	Air				4	No	Yes	No									
EC-UD-2-M-2			3.21	2														
RC-A-M-3	Fin & Tube	Air				5	No	Yes	No									
EC-UD-2-M-3			3.21	3														
RC-W-A-5	Co-Axial	Water				15	Yes	Yes	No									
EC-UD-2-A-5			4.91	3														

RCW models also available air cooled with same data as RC-A-M. EC-UD models in upflow and down flow. Horizontal flow also available. EC-UD models, except 5 ton, are available in 16x22x22 in. size.

Sunnyland—Crane Co., Chicago

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacities (B.t.u.h.) Cooling	Heating	Heating Type	Compressor Motor Phase	Volts	Compressor No.	Make	Hp.	Cooling Method	Type	Cylin.	Bore & Stroke (In.)	R.p.m.
§2-A-100	62½	36½	28	28,500	80,000**	Gas-Oil	1	230	1	Westinghouse	2	Gas	Access. Hermetic	2		1750
§3-A-140	68	44½	29	37,350	112,000	Gas-Oil	1—3	230/208/220	1	Westinghouse	3	Gas	Access. Hermetic	2		1750
§5-A-175	68	51	50	62,900	140,000	Gas-Oil	1—3	230/208/220	1	Westinghouse	5	Gas	Access. Hermetic			1750
§5-A-140	68	51	50	62,900	112,000	Gas-Oil	1—3	230/208/220	1	Westinghouse	5	Gas	Access. Hermetic			1750

Model No.	Condenser Type	Cooling Medium	Evaporator Face Area (Sq. Ft.)	Rows	Refrigerant Type	Charge (Lbs.)	Factory Charged?	Control Temp.	Damper	Air Filters No.	Type	Dimensions (In.)	Blowers In Evap. Unit?	No.	Nom. C.f.m.	R.p.m.	Net Weight	Water Usage Gpm/ton
§2-A-100	Tube In Tube	Water*	2.43	2	F-12		No	Yes		1	Disposable	25x16	Yes	1	1750	680	714	2.5
§3-A-140	Tube In Tube	Water*	3.47	2	F-22		No	Yes		1	Disposable	25x20	Yes	1	2500	600	900	3.0
§5-A-175	Shell & Tube	Water*	5.95	3	F-12		No	Yes		2	Disposable	25x20	Yes	1	3750	645	1380	3.0
§5-A-140	Shell & Tube	Water	5.95	3	F-12		No	Yes		2	Disposable	25x20	Yes	2	3000		1280	3.0

§Upflow only—2 and 3 hp. units also available in down flow. *Also available air cooled at slightly less capacity. **84,000 B.t.u. on oil-fired model.

Thatcher—Thatcher Furnace Co., Garwood, N. J.

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacities (B.t.u.h.) Cooling	Heating	Heating Type	Compressor Motor Phase	Volts	Compressor No.	Make	Hp.	Cooling Method	Type	Cylin.	Bore & Stroke (In.)	R.p.m.
AC21	24	36	44⅝	22,500			1	230	1	Tecumseh	2	Gas	Hermetic			
VU20	12½	24	24													
AC31	24	36	44⅝	35,300			1—3	230/220	1	Tecumseh	3	Gas	Hermetic			
VU30	14⅝	24	24													
AC51	28	41½	53	60,000			1—3	230/220	1	Tecumseh	5	Gas	Hermetic			
VU50	15⅝	30	30													
PAC21	18	30	38	19,250			1	230	1	Tecumseh	1⅝	Gas	Hermetic			
PAC31	28	30⅝	48⅝	34,000			1—3	230/220	1	Tecumseh	3	Gas	Hermetic			
WC31									1	Tecumseh	3	Gas	Hermetic			
WC51									1	Tecumseh	5	Gas	Hermetic			

Model No.	Condenser Type	Cooling Medium	Evaporator Face Area (Sq. Ft.)	Rows	Refrigerant Type	Charge (Lbs.)	Factory Charged?	Control Temp.	Damper	Air Filters No.	Type	Dimensions (In.)	Blowers In Evap. Unit?	No.	Nom. C.f.m.	R.p.m.	Net Weight	Water Usage Gpm/ton
AC21		Air			F-22	6	Yes										410	
VU20			2.31	4									No					
AC31		Air			F-22	6	Yes										440	
VU30			2.92	4									No					
AC51		Air			F-22	10	Yes										520	
VU50			4.60	4									No					
PAC21		Air	1.78	4	F-22	2	Yes							1	750			
PAC31		Air	3.12	4	F-22	4	Yes							1	1200			
WC31	Co-Axial	Water	2.91	4	F-22	6	Yes			1	Disposable	20x25x1		1	1200		425	4.5
WC51	Co-Axial	Water	4.23	4	F-22	10	Yes			2	Disposable	16x25x1		1	2000		475	7.5

Thermo-Products—Thermo-Products, Inc., North Judson, Ind.

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacities (B.t.u.h.) Cooling	Heating	Heating Type	Compressor Motor Phase	Volts	Compressor No.	Make	Hp.	Cooling Method	Type	Cylin.	Bore & Stroke (In.)	R.p.m.
201RA	24*	36*	44⅝*	22,500			1	230	1	Tecumseh	2			2		1725
301RA	24*	36*	44⅝*	35,300			1	230	1	Tecumseh	3			2		1725
501RA	28*	41½*	53*	60,000			1	230	1	Tecumseh	5			4		1725

Model No.	Condenser Type	Cooling Medium	Evaporator Face Area (Sq. Ft.)	Rows	Refrigerant Type	Charge (Lbs.)	Factory Charged?	Control Temp.	Damper	Air Filters No.	Type	Dimensions (In.)	Blowers In Evap. Unit?	No.	Nom. C.f.m.	R.p.m.	Net Weight	Water Usage Gpm/ton
201RA	Fin Tube	Air	2.35**	4		½	Yes	Yes	No									
301RA	Fin Tube	Air	4.10†	4		½	Yes	Yes	No									
501RA	Fin Tube	Air	4.75‡	4		½	Yes	Yes	No									

*Compressor-condenser cabinet. **2.04 on horizontal and downflow. †2.92 on horizontal and downflow. ‡4.2 on horizontal type. 4.4 on downflow.

Timken-Scaife—Scaife Co., Oakmont, Pa.

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacities (B.t.u.h.) Cooling	Heating	Heating Type	Compressor Motor Phase	Volts	Compressor No.	Make	Hp.	Cooling Method	Type	Cylin.	Bore & Stroke (In.)	R.p.m.
CL-72	25	25	39	24,000			1	230	1	Tecumseh	2		Hermetic	2	1.75x1.2	
*EBL-72	22	25	25				1	110								
CL-73	25	25	39	36,000			1—3	208/230	1	Tecumseh	3		Hermetic	2	2.0x1.2	
*EBL-73	22	25	25				1	110								
CL-75	46	41	30	60,000			1—3	208/230	1	Tecumseh	5		Hermetic	4	1.75x1.46	
*EBL-75	32	35⅝	35⅜				1	110								
SC-720	16¼	24	32	20,000			1	230	1	Tecumseh	1⅝		Hermetic	2		
SC-736	28	30	44	36,000			1	230	2	Tecumseh	1⅝		Hermetic	2		
§WP-72	66½	31¼	24	24,000			1	230	1	Tecumseh	2		Hermetic	2	1.75x1.2	
§WP-73	66½	31¼	24	36,000			1—3	208/230	1	Tecumseh	3		Hermetic	2	2.0x1.3	
§WP-75	66½	41½	24	60,000			1—3	208/230	1	Tecumseh	5		Hermetic	4	1.75x1.46	

Model No.	Condenser Type	Cooling Medium	Evaporator Face Area (Sq. Ft.)	Rows	Refrigerant Type	Charge (Lbs.)	Factory Charged?	Control Temp.	Damper	Air Filters No.	Type	Dimensions (In.)	Blowers In Evap. Unit?	No.	Nom. C.f.m.	R.p.m.	Net Weight	Water Usage Gpm/ton
CL-72	Tube & Fin	Air	2.37	3	F-22	4.75	Yes	Yes	No	1	Disposable	20x20	Some	1	800		420	
*EBL-72																		
CL-73	Tube & Fin	Air	3.34	3	F-22	5.75	Yes	Yes	No	1	Disposable	20x20	Some	1	1200		480	
*EBL-73																		
CL-75	Tube & Fin	Air	5.30	4	F-22	12.0	Yes	Yes	No	2	Disposable	22x16¼	Some	1	1750		700	
*EBL-75																		
SC-720	Tube & Fin	Air	1.5	5	F-22		Yes	Yes	No				Yes	1	710		250	
SC-736	Tube & Fin	Air	2.5	4	F-22		Yes	Yes	No				Yes	2	1200		435	
§WP-72	Coil	Water	3.06	3	F-22	4.75	Yes	Yes	No	1	Disposable	20x22	Yes	1	800		440	3.0
§WP-73	Coil	Water	3.06	4	F-22	5.75	Yes	Yes	No	1	Disposable	20x22	Yes	1	1200		485	4.5
§WP-75	Coil	Water	4.82	4	F-22	12.0	Yes	Yes	No	2	Disposable	22x16¼	Yes	1	1800		690	7.5

§Upflow. *Horizontal flow.

Typhoon—Typhoon Air Conditioning Co., Div. of Hupp Corp., Brooklyn

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacities (B.t.u.h.) Cooling	Heating	Heating Type	Compressor Motor Phase	Volts	Compressor No.	Make	Hp.	Cooling Method	Type	Cylin.	Bore & Stroke (In.)	R.p.m.
2ACCU	45	40	25½	24,900			1—3	230/208/220	1	Tecumseh	2	Gas	Hermetic	2	1⅝x1.2	1750
§2RECH	10⅝	28	18½													
3ACCU	45	40	25½	37,000			1—3	230/208/220	1	Tecumseh	3	Gas	Hermetic	2	2x1.2	1750
§3RECH	10⅝	28	26													
5ACCU	52	52	27½	60,600			1—3	230/208/220	1	Copeland	5	Gas	Access. Hermetic	2	2⅛x1 13/16	1750
§5RECH	10⅝	28	41													
8ACCU	56	62	35	88,800			1—3	230/208/220	1	Copeland	7½	Gas	Access. Hermetic	3	2⅜x3	1750
§8RECH	13⅝	28	41													
10ACCU	56	62	35	121,200			1—3	230/208/200	1	Copeland	10	Gas	Access. Hermetic	3	2 3/16x2	1750
*10LSU	32	55	37			Steam/H.W.										

Model No.	Condenser Type	Cooling Medium	Evaporator Face Area (Sq. Ft.)	Rows	Refrigerant Type	Charge (Lbs.)	Factory Charged?	Control Temp.	Damper	Air Filters No.	Type	Dimensions (In.)	Blowers In Evap. Unit?	No.	Nom. C.f.m.	R.p.m.	Net Weight	Water Usage Gpm/ton
2ACCU	Fin & Tube	Air			F-22	Var.	No	Opt.	No					1	2350	Var.	500	
§2RECH			2.35	3	F-12 or F-22	Var.	No	Opt.	No				No					
3ACCU	Fin & Tube	Air			F-22	Var.	No	Opt.	No					1	3500	Var.	535	
§3RECH			3.47	3	F-12 or F-22	Var.	No	No	No				No					
5ACCU	Fin & Tube	Air			F-12	Var.	No	Opt.	No					2	5800	Var.	775	
§5RECH			5.72	3	F-12 or F-22	Var.	No	No	No				No					
8ACCU	Fin & Tube	Air			F-12	Var.	No	Opt.	No					2	7500	Var.	1400	
§8RECH			5.72	5	F-12 or F-22	Var.	No	No	No				No					
10ACCU	Fin & Tube	Air			F-22	Var.	No	Opt.	No					2	9600	Var.	1470	
*10LSU			8.1	5	F-12 or F-22	Var.	No	Opt.	No	3	Disposable	16x25x1	Yes	1	4000	Var.	550	

§Upflow only. Also available in horizontal flow. *Horizontal flow only.

Vornado—O. A. Sutton Corp., Wichita, Kan.

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacities (B.t.u.h.) Cooling	Heating	Heating Type	Compressor Motor Phase	Volts	Compressor No.	Make	Hp.	Cooling Method	Type	Cylin.	Bore & Stroke (In.)	R.p.m.
B200BF-2	21	32¾	38¾	22,000			1	230	2	Tecumseh	1 ea.	Air	Reciprocating	2	1 5/16x1 1/64	1725
B200C-2	21	32¾	38¾	22,000			1	230	2	Tecumseh	1 ea.	Air	Reciprocating	2	1 5/16x1 1/64	1725
B350BF-2	24¾	39½	48¼	36,000			1	230	2	Tecumseh	1¾ ea.	Air	Reciprocating	2	1⅝x1 1/64	1725
B350C-2	24¾	36¼	48¼	36,000			1	230	2	Tecumseh	1¾ ea.	Air	Reciprocating	2	1⅝x1 1/64	1725

Model No.	Condenser Type	Cooling Medium	Evaporator Face Area (Sq. Ft.)	Rows	Refrigerant Type	Charge (Lbs.)	Factory Charged?	Control Temp.	Damper	Air Filters No.	Type	Dimensions (In.)	Blowers In Evap. Unit?	No.	Nom. C.f.m.	R.p.m.	Net Weight	Water Usage Gpm/ton
B200BF-2	Fin & Tube	Air	1.9	3	F-22	3# 2	Yes	Yes	No	1	Disposable	1x12x24	Yes		900	1125	343	
B200C-2	Fin & Tube	Air	1.9	3	F-22	3# 2	Yes	Yes	No	1	Disposable	1x12x24	Yes		900	1125	343	
B350BF-2	Fin & Tube	Air	2.7	4	F-22	5# 6	Yes	Yes	No	1	Disposable	1x14x28	Yes		1500	1125	508	
B350C-2	Fin & Tube	Air	2.7	4	F-22	5# 6	Yes	Yes	No	1	Disposable	1x14x28	Yes		1500	1125	508	

Waterbury—Waterman-Waterbury Co., Minneapolis

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacities (B.t.u.h.) Cooling	Heating	Heating Type	Compressor Motor Phase	Volts	Compressor No.	Make	Hp.	Cooling Method	Type	Cylin.	Bore & Stroke (In.)	R.p.m.
2ARE21	20¼	29	24¾	20,500			1	230	1	Tecumseh	1½	Suction	Hermetic	2	1 1/64x1⅝	1725
2ARE2A	11⅛	20⅞	20⅞													
2ARE31	28⅜	26	40¼	34,500			1—3	230/208/220	1	Tecumseh	3	Suction	Hermetic	2	2x1.2	1725
2ARE3A	14½	20⅞	20⅞													
2ARE51	39¾	34⅛	48¼	57,500			1—3	230/208/220	1	Tecumseh	5	Suction	Hermetic	4	1⅝x1 7/16	1725
2ARE5A	18⅞	25⅞	24⅛													
2HA2	16½	26¼	28¾	20,000					1	Tecumseh	1½	Suction	Hermetic	2	1 1/64x1⅝	1725
2HA4	24¼	20	42¼	37,000					2	Tecumseh	1½	Suction	Hermetic	2	1 1/64x1⅝	1725

Model No.	Condenser Type	Cooling Medium	Evaporator Face Area (Sq. Ft.)	Rows	Refrigerant Type	Charge (Lbs.)	Factory Charged?	Control Temp.	Damper	Air Filters No.	Type	Dimensions (In.)	Blowers In Evap. Unit?	No.	Nom. C.f.m.	R.p.m.	Net Weight	Water Usage Gpm/ton
2ARE21	Fin & Tube	Air																
2ARE2A			1.95	3	F-22	.2	Yes											
2ARE31	Fin & Tube	Air																
2ARE3A			3.2	3	F-22	.3	Yes											
2ARE51	Fin & Tube	Air																
2ARE5A			5.0	3	F-22	.8	Yes											
2HA2	Fin & Tube	Air	2.5	3	F-22													
2HA4	Fin & Tube	Air	3.2	3	F-22													

Weatheramic—Utility Appliance Corp., Los Angeles

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacities (B.t.u.h.) Cooling	Heating	Heating Type	Compressor Motor Phase	Volts	Compressor No.	Make	Hp.	Cooling Method	Type	Cylin.	Bore & Stroke (In.)	R.p.m.
§HC-2075-A	67	27	27	24,000	75,000	Gas	1—3	230		Tecumseh	2	Suction				
§HC-3105-A	67	37	27	35,000	105,000	Gas	1—3	230		Tecumseh	3	Suction				
§HC-2075	67	27	27	24,500	75,000	Gas	1—3	230		Tecumseh	2	Suction				
§HC-3105	67	37	27	36,000	105,000	Gas	1—3	230		Tecumseh	3	Suction				
UAC-E2T	23	30	34	20,500			1—3	230		Tecumseh	2	Suction				
UAC-2T	27	34	41	24,000			1—3	230		Tecumseh	2	Suction				
2TSB																
UAC-3TL	27	34	41	35,500*			1—3	230		Tecumseh	3	Suction				
3TSB																
UAC5T	30	42	48	56,500			1—3	230		Tecumseh	5	Suction				

Model No.	Condenser Type	Cooling Medium	Evaporator Face Area (Sq. Ft.)	Rows	Refrigerant Type	Charge (Lbs.)	Factory Charged?	Control Temp.	Damper	Air Filters No.	Type	Dimensions (In.)	Blowers In Evap. Unit?	No.	Nom. C.f.m.	R.p.m.	Net Weight	Water Usage Gpm/ton
§HC-2075-A	Fin Tube	Air	2.05	4	F-22		Yes	Yes	No	2	Disposable	15x20x1	Yes	1	800			
§HC-3105-A	Fin Tube	Air	2.91	4	F-22		Yes	Yes	No	2	Disposable	20x20x1	Yes	1	1200			
§HC-2075	Tube In Tube	Water	2.05	4	F-22	42	Yes	Yes	No	2	Disposable	15x20x1	Yes	1	800			1.4
§HC-3105	Tube In Tube	Water	2.91	4	F-22	47	Yes	Yes	No	2	Disposable	20x20x1	Yes	1	1200			1.6
UAC-E2T	Fin & Tube	Air	2.67	3	F-22	8.5	Yes	Yes	No									
UAC-2T	Fin & Tube	Air	2.67	3	F-22	8.5	Yes	Yes	No									
2TSB			2.20	4	F-22	8.5	Yes	Yes	No	1	Disposable	20x25x1	Yes	1	850			
UAC-3TL	Fin & Tube	Air	3.10	4	F-22	11.5	Yes	Yes	No									
3TSB			2.93	4	F-22	11.5	Yes	Yes	No	1	Disposable	20x25x1	Yes	1	1250			
UAC5T	Fin & Tube	Air	5.35	4	F-22	20	Yes	Yes	No									

§Upflow only. UAC models for universal application—remote. *36,750 in heavy-duty (VAC-3TH) model.

Weathermakers—Carrier Corp., Syracuse, N. Y.

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacities (B.t.u.h.) Cooling	Heating	Heating Type	Compressor Motor Phase	Volts	Compressor No.	Make	Hp.	Cooling Method	Type	Cylin.	Bore & Stroke (In.)	R.p.m.
38C2	62	38	28	27,850	85,000	Gas	1-2-3	208/230/440	1	Carrier		Refrig.	Hermetic	2	2x1⅛	1750
38C4	62½	46	28⅞	45,800	112,000	Gas	1-2-3	208/230/440	1	Carrier		Refrig.	Hermetic	4	2x1⅛	1750
38C2	62	38	28	24,000	85,000	Gas	1-2-3	208/230/440	1	Carrier		Refrig.	Hermetic	2	2x1⅛	1750
38C4	62½	46	28⅞	36,000	112,000	Gas	1-2-3	208/230/440	1	Carrier		Refrig.	Hermetic	4	2x1⅛	1750
38B6	70	50	40⅞	60,000	152,000	Gas	1-2-3	208/230/440	1	Carrier		Refrig.	Hermetic	4	1 13/16x1⅛	1750
38B8	70	60	43	90,000	152,000	Gas	1-2-3	208/230/440	1	Carrier		Refrig.	Hermetic	4	2x1 7/16	1750
38D2	12¾	24	34⅛	27,400			1-2-3	208/230/440	1	Carrier		Refrig.	Hermetic	2	2x1⅛	1750
38L2*	26⅛	42⅝	27⅞													
38D4	16⅝	27⅞	37⅛	40,000			1-2-3	208/230/440	1	Carrier		Refrig.	Hermetic	4	2x1⅛	1750
38L4*	26⅛	49⅝	31⅞													
38D6	14⅝	34⅛	42½	53,600			1-2-3	208/230/440	1	Carrier		Refrig.	Hermetic	4	2x1 7/16	1750
38L6*	26⅛	49⅝	31⅞													

Model No.	Condenser Type	Cooling Medium	Evaporator Face Area (Sq. Ft.)	Rows	Refrigerant Type	Charge (Lbs.)	Factory Charged?	Control Temp.	Damper	Air Filters No.	Type	Dimensions (In.)	Blowers In Evap. Unit?	No.	Nom. C.f.m.	R.p.m.	Net Weight	Water Usage Gpm/ton
38C2	Finned Coil	Air	2.77		C-7	10½	No	Yes	Yes	1	Disposable	20x25	Yes	1	800	721	610	
38C4	Finned Coil	Air	3.67		F-12	20	No	Yes	Yes	2	Disposable	16x25	Yes	1	1200	712	830	
38C2	Shell-Coil	Water	2.77		F-12	4	No	Yes	Yes	1	Disposable	20x25	Yes	1	800	721	575	
38C4	Shell-Coil	Water	3.67		F-22	4	No	Yes	Yes	2	Disposable	16x25	Yes	1	1200	712	765	
38B6	Shell-Coil	Water	5.16		F-22	12	No	Yes	Yes	3	Disposable	20x25	Yes	1	2000	730	1420	
38B8	Shell-Coil	Water	7.75		F-22	14½	No	Yes	Yes	3	Disposable	20x25	Yes	1	2500	720	1710	
38D2	Finned Coil	Air			C-7	10½		Yes	No								408	
38L2*			3.21										No					
38D4	Finned Coil	Air			F-12	20		Yes	No								525	
38L4*			3.50										No					
38D6	Finned Coil	Air			C-7	18		Yes	No								580	
38L6*			4.08										No					

*For upflow, down flow, and horizontal flow.

Weathertrol—Therm-Air Mfg. Co., Peekskill, N. Y.

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacities (B.t.u.h.) Cooling	Heating	Heating Type	Compressor Motor Phase	Volts	Compressor No.	Make	Hp.	Cooling Method	Type	Cylin.	Bore & Stroke (In.)	R.p.m.
LB 2	47	31	28	24,600			1—3	208/220/230	1	Tecumseh	2	Refrig.		2		1750
LB 3	47	31	28	36,800			1—3	208/220/230	1	Tecumseh	3	Refrig.		2		1750
LB 5	61	38½	28	60,800			1—3	208/220/230	1	Tecumseh	5	Refrig.		4		1750
LB 7½	61	38½	28	94,400			1—3	208/220/230	1	Worthington	7½	Refrig.		5		1750
AIR 2	30	28	36	23,800			1—3	208/220/230	1	Tecumseh	2	Refrig.		2		1750
AIR 3	30	28	36	35,600			1—3	208/220/230	1	Tecumseh	3	Refrig.		2		1750
AIR 5	30	46	40	61,000			1—3	208/220/230	1	Tecumseh	5	Refrig.		4		1750

Model No.	Condenser Type	Cooling Medium	Evaporator Face Area (Sq. Ft.)	Rows	Refrigerant Type	Charge (Lbs.)	Factory Charged?	Control Temp.	Damper	Air Filters No.	Type	Dimensions (In.)	Blowers In Evap. Unit?	No.	Nom. C.f.m.	R.p.m.	Net Weight	Water Usage Gpm/ton
LB 2	Tube In Tube	Water		4	F-22		Yes	Yes	No	1	Disposable	20x20x1	Yes	1	800		450	3
LB 3	Tube In Tube	Water		4	F-22		Yes	Yes	No	1	Disposable	20x20x1	Yes	1	1200		500	4½
LB 5	Tube In Tube	Water		4	F-22		Yes	Yes	No	2	Disposable	16x25x1	Yes	1	2000		825	7½
LB 7½	Tube In Tube	Water		4	F-22		Yes	Yes	No	2	Disposable	15x30¾x1	Yes	1	3000		1100	11½
AIR 2	Fin & Tube	Air		4	F-22		No	Yes	No									
AIR 3	Fin & Tube	Air		4	F-22		No	Yes	No									
AIR 5	Fin & Tube	Air		4	F-22		No	Yes	No									

Residential

Weatherwise—A. G. Barkow Mfg. Co., Milwaukee

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacities (B.t.u.h.) Cooling	Heating	Heating Type	Compressor Motor Phase	Volts	Compressor No.	Make	Hp.	Cooling Method	Type	Cylin.	Bore & Stroke (In.)	R.p.m.
FK2-A	63*	31	23	24,000	...	...	1	230	1	Tecumseh	2	Gas	Hermetic	2	1.75x1.2	1725
FK3-A	63	31	22	36,000	...	...	1—3	230/220/208	1	Tecumseh	3	Gas	Hermetic	2	2x1.2	1725
FK5-A	66½	38	24¼	60,000	...	...	1—3	230/220/208	1	Tecumseh	5	Gas	Hermetic	4	1.75x1.4375	1725
FK75-A	66½	52½	24¼	90,000	...	...	1—3	230/220/208	1	Copeland	7½	Gas	Semi-Hermetic	2	2.375x2	1750
FK2-W	63	31	22	24,000	...	...	1	230	1	Tecumseh	2	Gas	Hermetic	2	1.75x1.2	1725
FK3-W	63	31	22	36,000	...	...	1—3	230/220/208	1	Tecumseh	3	Gas	Hermetic	2	2x1.2	1725
FK5-W	66½	38	24¼	60,000	...	...	1—3	230/220/208	1	Tecumseh	5	Gas	Hermetic	4	1.75x1.4375	1725
FK75-W	66½	52½	24¼	90,000	...	...	3	220/208	1	Copeland	7½	Gas	Semi-Hermetic	2	2.375x2	1750
§RO3-A	17⅞	24½	36	36,000	...	...	1—3	230/220/208	1	Tecumseh	3	Gas	Hermetic	2	2x1.2	1725

Model No.	Condenser Type	Cooling Medium	Evaporator Face Area (Sq. Ft.)	Rows	Refrigerant Type	Charge (Lbs.)	Factory Charged?	Control Temp.	Damper	Air Filters No.	Type	Dimensions (In.)	Blowers In Evap. Unit?	No.	Nom. C.f.m.	R.p.m.	Net Weight	Water Usage Gpm/ton
FK2-A	Fin Tube	Air	2.66	4	F-22	6	...	...	...	1	Permanent	16x25x1	...	1	800	650	...	...
FK3-A	Fin Tube	Air	2.66	4	F-22	8	...	...	...	1	Permanent	16x25x1	...	1	1200	650	...	...
FK5-A	Fin Tube	Air	4.12	4	F-12	12	...	...	...	2	Permanent	15x20x1	...	1	2000	700	...	...
FK75-A	Fin Tube	Air	5.62	4	F-22	18	...	...	...	3	Permanent	15x20x1	...	2	3000	618	...	...
FK2-W	Fin Tube	Water	2.66	4	F-22	4	...	...	...	1	Permanent	16x25x1	...	1	800	650	...	...
FK3-W	Fin Tube	Water	2.66	4	F-22	6	...	...	...	1	Permanent	16x25x1	...	1	1200	650	...	...
FK5-W	Fin Tube	Water	4.12	4	F-22	8	...	...	...	2	Permanent	15x20x1	...	1	2000	700	...	...
FK75-W	Fin Tube	Water	5.62	4	F-22	18	...	...	...	3	Permanent	15x20x1	...	2	3000	618	...	...
§RO3-A	Fin Tube	Air	2.66	4	F-22	Holding	Yes	Yes	Yes	...	...	...	No	...	...	...	...	...

§Upflow only, horizontal and downflow available. Horizontal flow in 5-ton unit, too.

Westinghouse—Westinghouse Electric Corp., Air Conditioning Div., Staunton, Va.

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacities (B.t.u.h.) Cooling	Heating	Heating Type	Compressor Motor Phase	Volts	Compressor No.	Make	Hp.	Cooling Method	Type	Cylin.	Bore & Stroke (In.)	R.p.m.
AU-301	22¼	26½	26½	18,000	...	...	1	230	1	Tecumseh	2	Refrig.	Hermetic	2	1⅝x1 1/64	1725
AU-352	35½	36	26¼	**	...	...	1	230	1	Westinghouse	2	Refrig.	Acc. Hermetic	2	2x1½	1750
AU-401	26¼	31½	31½	**	...	...	1	230	1	Tecumseh	3	Refrig.	Hermetic	2	2x1½	1725
AU-452	39⅝	36	29	**	...	...	1—3	230/208/220	1	Westinghouse	3	Refrig.	Acc. Hermetic	2	2x1½	1750
AU-601	31¼	36¼	26	**	...	...	1—3	230/208/220	1	Westinghouse	5	Refrig.	Acc. Hermetic	2	2⅝x2⅛	1750
AU-652	49⅞	51½	30	**	...	...	1—3	230/208/220	1	Westinghouse	5	Refrig.	Acc. Hermetic	2	2⅝x2⅛	1750
AU-802	49⅞	51½	30	70,000	...	...	3	208/220	1	Westinghouse	7½	Refrig.	Acc. Hermetic	2	2⅝x2⅛	1750
RU-403	63¾	34⅞	25	38,000	...	...	1—3	230/208/220	1	Westinghouse	3	Refrig.	Acc. Hermetic	2	2x1½	1725
RU-603	67½	41⅞	27	60,000	...	...	1—3	230/08/20/40	1	Westinghouse	5	Refrig.	Acc. Hermetic	2	2⅝x2⅛	1725
RU-803	73⅜	53¼	38½	90,000	...	...	3	220/208/440	1	Westinghouse	7½	Refrig.	Acc. Hermetic	2	2⅝x2⅛	1725
RG/RO-2	70⅝	24⅝	38⅞	24,000	90,000‡	Gas/Oil	1	230	1	Westinghouse	2	Refrig.	Acc. Hermetic	2	2x1½	1750
RG/RO-3	69⅝	40⅜	29¼	38,000	130,000‡	Gas/Oil	1—3	230/208/220	1	Westinghouse	3	Refrig.	Acc. Hermetic	2	2x1½	1750

Model No.	Condenser Type	Cooling Medium	Evaporator Face Area (Sq. Ft.)	Rows	Refrigerant Type	Charge (Lbs.)	Factory Charged?	Control Temp.	Damper	Air Filters No.	Type	Dimensions (In.)	Blowers In Evap. Unit?	No.	Nom. C.f.m.	R.p.m.	Net Weight	Water Usage Gpm/ton
AU-301	Finned Tube	Air	2.80	3	F-22	*	Yes	Opt.	No	...	...	...	Yes†	1	1700	1015	200	...
AU-352	Finned Tube	Air	2.80	3	F-12	*	Yes	Opt.	No	...	...	...	Yes†	1	1750	680	500	...
AU-401	Finned Tube	Air	4.25	3	F-22	*	Yes	Opt.	No	...	...	...	Yes†	1	2700	680	330	...
AU-452	Finned Tube	Air	4.25	3	F-22	*	Yes	Opt.	No	...	...	...	Yes†	1	2400	665	605	...
AU-601	Finned Tube	Air	6.97	3	F-12	*	Yes	Opt.	No	...	...	...	Yes†	1	4500	680	620	...
AU-652	Finned Tube	Air	6.97	3	F-12	*	Yes	Opt.	No	...	...	...	Yes†	1	3700	620	954	...
AU-802	Finned Tube	Air	6.97	3	F-22	*	Yes	Opt.	No	...	...	...	Yes†	2	4900	695	985	...
RU-403	Tube-In-Tube	Water	2.92	2	F-22	3	Yes	No	No	1	Permanent	20x25x1	Yes	1	1200	1725	650	5.15
RU-603	Shell & Coil	Water	3.95	3	F-12	11	Yes	No	No	2	Permanent	16x20x1	Yes	1	2000	1725	870	7.38
RU-803	Shell & Coil	Water	5.95	3	F-22	11	Yes	No	No	2	Permanent	1—20x20x1 1—20x25x1	Yes	1	3000	1725	1150	11.2
RG/RO-2	Shell & Coil	Water	1.55	3	F-12	4½	Yes	Yes	Opt.	1	Disposable	20x21x1	Yes	1	800	850	880	2.6
RG/RO-3	Shell & Coil	Water	2.17	3	F-22	5	Yes	Yes	Opt.	1	Permanent	16x25x1	Yes	1	1000	1045	930	3.7

All models upflow only. Horizontal flow available in 2, 3 hp. only. *Refrigerant charge depends on installation requirement. **16 combinations in 3,000 B.t.u./hr. increments. ‡Input gas. †Condenser blower.

Williamson—Williamson Co., Cincinnati

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacities (B.t.u.h.) Cooling	Heating	Heating Type	Compressor Motor Phase	Volts	Compressor No.	Make	Hp.	Cooling Method	Type	Cylin.	Bore & Stroke (In.)	R.p.m.
6111-15-2090	17	34½	23½	18,000	...	...	1	230	1	Copeland	1½	Gas	Semi-Hermetic	2	...	1725
*6113-15	13⅛	18	8	...	...	...	...	...	...	...	...	...	...	...	...	...
6121-17-2090	17	34½	23½	21,000	...	...	1	230	1	Tecumseh	1¾	Gas	Hermetic	2	...	1725
*6123-17	13⅛	18	8	...	...	...	...	...	...	...	...	...	...	...	...	...
6111-02-2091	32	49	20	24,000	...	...	1—3	230/208/220	1	Copeland	2	Gas	Semi-Hermetic	2	1 15/16x1¾	1725
§6112-02	81	34½	22	...	...	...	...	...	...	...	...	...	...	...	...	...
6121-25-2090	32	49	20	30,000	...	...	1	230	1	Tecumseh	3	Gas	Hermetic	2	...	1725
§6122-25	81	34½	22½	...	...	...	...	...	...	...	...	...	...	...	...	...
6111-03-2091	32	49	20	36,000	...	...	1—3	230/208/220	1	Copeland	3	Gas	Semi-Hermetic	2	2¼x1 7/16	1725
§6112-03	81	30	22½	...	...	...	...	...	...	...	...	...	...	...	...	...
6111-04-2091	32	52	27	48,000	...	...	1—3	230/208/220	1	Copeland	5	Gas	Semi-Hermetic	3	2½x1 13/16	1725
§U6112-04	81	30	22½	...	...	...	...	...	...	...	...	...	...	...	...	...
6111-05-2090	56½	54	22	60,000	...	...	1—3	230/208/220	1	Copeland	5	Gas	Semi-Hermetic	3	2½x1 13/16	1725
§U6112-05	81	30	22½	...	...	...	...	...	...	...	...	...	...	...	...	...
6131-07-2090	60½	68	26½	90,000	...	...	3	208/220	1	Copeland	7½	Gas	Semi-Hermetic	3	2⅝x2	1725
§U6132-07	81	48	22½	...	...	...	...	...	...	...	...	...	...	...	...	...

Model No.	Condenser Type	Cooling Medium	Evaporator Face Area (Sq. Ft.)	Rows	Refrigerant Type	Charge (Lbs.)	Factory Charged?	Control Temp.	Damper	Air Filters No.	Type	Dimensions (In.)	Blowers In Evap. Unit?	No.	Nom. C.f.m.	R.p.m.	Net Weight	Water Usage Gpm/ton
6111-15-2090	Tube & Fin	Air	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
*6113-15	...	...	1.2	4	F-12	6	Yes	No	No	...	...	...	...	...	...	...	...	...
6121-17-2090	Tube & Fin	Air	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
*6123-17	...	...	1.2	4	F-22	7	Yes	No	No	...	...	...	...	...	...	...	...	...
6111-02-2091	Tube & Fin	Air	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
§6112-02	...	...	2.3	3	F-12	9	Yes	No	No	2	Disposable	16x25x1	Yes	1	700	...	...	...
6121-25-2090	Tube & Fin	Air	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
§6122-25	...	...	2.3	4	F-22	...	Yes	No	No	2	Disposable	16x25x1	Yes	1	875	...	...	...
6111-03-2091	Tube & Fin	Air	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
§6112-03	...	...	2.3	4	F-12	12	Yes	No	No	2	Disposable	16x25x1	Yes	1	1050	...	...	...
6111-04-2091	Tube & Fin	Air	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
§U6112-04	...	...	4.0	4	F-12	17	Yes	No	No	2	Disposable	16x25x1	Yes	1	1400	...	...	...
6111-05-2090	Tube & Fin	Air	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
§U6112-05	...	...	4.0	4	F-12	21	Yes	No	No	2	Disposable	16x25x1	Yes	1	1750	...	...	...
6131-07-2090	Tube & Fin	Air	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
§U6132-07	...	...	6.2	4	F-12	34	Yes	No	No	2	Disposable	20x25x1 16x25x1	Yes	2	2625	...	...	...

§Upflow only. Also available in down and horizontal flow. 6131-07 in up and horizontal flow only. *Horizontal flow only.

Wizard—Western Auto Supply Co., Kansas City, Mo.

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacities (B.t.u.h.) Cooling	Heating	Heating Type	Compressor Motor Phase	Volts	Compressor No.	Make	Hp.	Cooling Method	Type	Cylin.	Bore & Stroke (In.)	R.p.m.
6J1757	16¼	26¾	31½	18,500	...	...	1	230	1	Tecumseh	2	Gas	Access. Hermetic	...	...	...
6JF1758	20¼	29	29⅝	20,500	...	...	1	230/115	1	Tecumseh	2	Gas	Access. Hermetic	...	...	...
Evap. Sec.	16⅝	32⅛	30	...	...	...	...	...	...	...	...	...	...	...	...	...
6J1768	28	28⅝	40¼	32,900	...	...	1	230/115	1	Tecumseh	3	Gas	Access. Hermetic	...	...	...
Evap. Sec.	16⅝	32⅛	30	...	...	...	...	...	...	...	...	...	...	...	...	...
6J1777	24¼	30	42	37,000	...	...	1	230	2	Tecumseh	2	Gas	Access. Hermetic	...	...	...
6JF1788	39⅝	34⅛	48⅝	58,000	...	...	1	230/115	1	Tecumseh	5	Gas	Access. Hermetic	...	...	...
Evap. Sec.	22	38	36	...	...	...	...	...	...	...	...	...	...	...	...	...
6JF1789	39⅝	34⅛	48⅝	58,000	...	...	3	230/115	1	Tecumseh	5	Gas	Access. Hermetic	...	...	...
Evap. Sec.	22	38	36	...	...	...	...	...	...	...	...	...	...	...	...	...

Model No.	Condenser Type	Cooling Medium	Evaporator Face Area (Sq. Ft.)	Rows	Refrigerant Type	Charge (Lbs.)	Factory Charged?	Control Temp.	Damper	Air Filters No.	Type	Dimensions (In.)	Blowers In Evap. Unit?	No.	Nom. C.f.m.	R.p.m.	Net Weight	Water Usage Gpm/ton
6J1757	...	Air	...	...	F-22	...	Yes	Yes	No	1	Disposable	...	Yes	1	600	1725	...	...
6JF1758	...	Air	...	...	F-22	...	Yes	...	...	...	...	...	...	...	...	...	...	...
Evap. Sec.	...	...	...	...	F-22	...	Yes	Yes	No	1	Disposable	...	Yes	1	800	1725	...	...
6J1768	...	Air	...	...	F-22	...	Yes	...	...	...	...	...	...	...	...	...	...	...
Evap. Sec.	...	...	...	...	F-22	...	Yes	Yes	No	1	Disposable	...	Yes	1	1200	1725	...	...
6J1777	...	Air	...	...	F-22	...	Yes	Yes	No	1	Disposable	...	Yes	1	1200	1725	...	...
6JF1788	...	Air	...	...	F-22	...	Yes	...	...	...	...	...	...	...	...	...	...	...
Evap. Sec.	...	...	...	...	F-22	...	Yes	Yes	No	1	Disposable	...	Yes	1	2000	1725	...	...
6JF1789	...	Air	...	...	F-22	...	Yes	...	...	...	...	...	...	...	...	...	...	...
Evap. Sec.	...	...	...	...	F-22	...	Yes	Yes	No	1	Disposable	...	Yes	1	2000	1725	...	...

Worthington—Worthington Corp., Harrison, N. J.

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacities (B.t.u.h.) Cooling	Heating	Heating Type	Compressor Motor Phase	Volts	Compressor No.	Make	Hp.	Cooling Method	Type	Cylin.	Bore & Stroke (In.)	R.p.m.
SCYH-20	70⅛	42	29	24,000	83,000	...	1—3	230/208/220	1	...	2	Gas	Hermetic	2	...	1750
SCYH-40	70⅛	42	29	36,000	83,000	...	1—3	230/208/220	1	...	3	Gas	Hermetic	3	...	1750
RAC200	13½	42¼	24¼	24,000	...	...	1—3	230/208/220	1	...	2	Gas	Hermetic	2	1 15/16x1 7/16	1750
RWC200	15⅝	18⅝	15⅝	24,000	...	...	1—3	230/208/220	1	...	2	Gas	Hermetic	2	1 15/16x1 7/16	1750
§RXE230	15	23¼	24½	...	...	...	...	...	...	...	...	...	...	...	...	...
RAC400	15⅞	47¼	25⅝	36,000	...	...	1—3	230/208/220	1	...	3	Gas	Hermetic	2	1 15/16x1 7/16	1750
RWC400	15⅝	18⅝	15⅝	36,000	...	...	1—3	230/208/220	1	...	3	Gas	Hermetic	2	1 15/16x1 7/16	1750
§RXE430	15	23¼	24½	...	...	...	...	...	...	...	...	...	...	...	...	...
RAC600	38	55½	28⅝	60,000	...	...	1—3	230/208/220	1	...	5	Gas	Hermetic	3	1 15/16x1 7/16	1750
RWC600	15⅞	18⅝	15⅝	60,000	...	...	1—3	230/208/220	1	...	5	Gas	Hermetic	3	1 15/16x1 7/16	1750
§RXE630	17¼	26⅝	29	...	...	...	...	...	...	...	...	...	...	...	...	...
RAC900	41¼	67	31⅝	90,000	...	...	...	...	1	...	7½	Gas	Hermetic	5	1 15/16x1 7/16	1750
RWC900	21	20¼	21	90,000	...	...	...	...	1	...	7½	Gas	Hermetic	5	1 15/16x1 7/16	1750
*RXE940	27¼	46	7⅛	...	...	...	...	...	...	...	...	...	...	...	...	...

Model No.	Condenser Type	Cooling Medium	Evaporator Face Area (Sq. Ft.)	Rows	Refrigerant Type	Charge (Lbs.)	Factory Charged?	Control Temp.	Damper	Air Filters No.	Type	Dimensions (In.)	Blowers In Evap. Unit?	No.	Nom. C.f.m.	R.p.m.	Net Weight	Water Usage Gpm/ton
SCYH-20	...	Water	2.8	2	F-12	12.3	Holding	Yes	...	...	Disposable	16x25x1	Yes	2	1000	757	1200	1.3
SCYH-40	...	Water	3.5	2	F-12	13.4	Holding	Yes	...	...	Disposable	16x25x1	Yes	2	1200	910	1200	2.5
RAC200	...	Air	...	...	F-12	7.0	Holding	Yes	...	...	...	...	...	...	...	...	...	...
RWC200	...	Water	...	...	F-12	4.0	Holding	Yes	...	...	...	...	...	...	...	...	...	...
§RXE230	...	...	3.21	3	F-12	3.5	Holding	...	...	...	...	...	...	...	...	...	...	...
RAC400	...	Air	...	...	F-22	9.0	Holding	Yes	...	...	...	...	...	...	...	...	...	...
RWC400	...	Water	...	...	F-22	6.0	Holding	Yes	...	...	...	...	...	...	...	...	...	...
§RXE430	...	...	3.21	3	F-22	3.5	Holding	...	...	...	...	...	...	...	...	...	...	...
RAC600	...	Air	...	...	F-22	11.0	Holding	Yes	...	...	...	...	...	...	...	...	...	...
RWC600	...	Water	...	...	F-22	7.0	Holding	Yes	...	...	...	...	...	...	...	...	...	...
§RXE630	...	...	4.8	3	F-22	4.7	Holding	...	...	...	...	...	...	...	...	...	...	...
RAC900	...	Air	...	...	F-22	15.0	Holding	Yes	...	...	...	...	...	...	...	...	...	...
RWC900	...	Water	...	...	F-22	8.0	Holding	Yes	...	...	...	...	...	...	...	...	...	...
*RXE940	...	...	6.25	4	F-22	6.0	Holding	Yes	...	...	Cleanable	22¾x22¾x⅞	Yes	2	3000	600	348	8.5

§Upflow only. Also available in horizontal flow. *Horizontal flow only. RXE evaporator units applicable with both air-cooled and water-cooled condensing units.

Yorkaire—York Corp., subsidiary of Borg-Warner Corp., York, Pa.

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacities (B.t.u.h.) Cooling	Heating	Heating Type	Compressor Motor Phase	Volts	Compressor No.	Make	Hp.	Cooling Method	Type	Cylin.	Bore & Stroke (In.)	R.p.m.
HCF304AR	18	28	36	17,900	16,200	Rev. Cycle*	1	230/208	1	...	1½	Gas	Hermetic	2	1⅝x1 1/64	1750
P20F	21¾	28	45	23,400	...	...	1	230/208	2	York	1	Gas	Hermetic	2	1⅝x27/32	1750
P30F	24	36	49	36,000	...	...	1	230/208	2	...	1½	Gas	Hermetic	2	...	1750
HCS250A	33	31½	25½	23,450	...	...	1	230/208	2	York	1	Gas	Hermetic	2	1⅝x27/32	1725
§2U30-50	18	20¼	19	...	...	...	...	...	...	...	...	...	...	...	...	...
HCS353A	35	43⅛	29¼	33,430	...	...	1	230/208	2	York	1½	Gas	Hermetic	3	1⅝x27/32	1725
§3U30-50	18	19⅛	28¼	...	...	...	...	...	...	...	...	...	...	...	...	...
CA20	25½	33	29½	23,000	...	...	1	230/208	1	...	2	Gas	Hermetic	2	...	1750
CW20	28¾	37½	28½	27,000	...	...	1—3	230/208/220	1	York	2	Gas	Hermetic	3	1⅝x1 1/8	1750
§2UX	18	20¼	19	...	...	...	...	...	...	...	...	...	...	...	...	...
CA30	27¾	29	34	34,500	...	...	1	230/208	1	York	3	Gas	Hermetic	3	1⅝x1	1750
CW30	28¼	37½	28½	40,000	...	...	1-2-3	230/08/20/440	1	York	3	Gas	Hermetic	3	1⅝x1¼	1750
§3UX	18	19⅛	28¾	...	...	...	...	...	...	...	...	...	...	...	...	...
HCS500A	30	49¼	28¼	54,000	...	...	1-2-3	230/08/20/440	1	York	5	Gas	Hermetic	6	1⅝x13/16	1750
CW50	28¾	37½	28¼	65,000	...	...	1—3	230/208/220	1	York	5	Gas	Hermetic	4	1⅝x1 9/32	1750
§5UX	18⅝	27	32⅜	...	...	...	...	...	...	...	...	...	...	...	...	...
HCS750A	33	64¼	38¼	81,000	...	...	3—3	230/08/20/440	1	York	7½	Gas	Hermetic	6	1⅝x1 9/32	1750
CW75	28¼	37½	28¼	96,000	...	...	3	220/208	1	York	7½	Gas	Hermetic	6	1⅝x1 9/32	1750
†75DX	23⅛	46	7⅛	...	...	...	...	...	...	...	...	...	...	...	...	...
R2Y	63⅝	26⅝	16⅝¶	24,800	...	...	1	230/208/220	2	York	1	Gas	Hermetic	2	1⅝x27/32	1750
R3Y	63⅝	28⅝	18⅝¶	36,000	...	...	1—3	230/208/220	2	York	1½	Gas	Hermetic	3	1⅝x27/32	1750
HC11F	39	17⅝	16⅝††	12,200	...	...	1	230/208	1	York	1	Gas	Hermetic	2	1⅝x27/32	1750
HC152F	47	17⅝	16⅝††	18,800	...	...	1	230/208	1	York	1½	Gas	Hermetic	3	1⅝x27/32	1750

Model No.	Condenser Type	Cooling Medium	Evaporator Face Area (Sq. Ft.)	Rows	Refrigerant Type	Charge (Lbs.)	Factory Charged?	Control Temp.	Damper	Air Filters No.	Type	Dimensions (In.)	Blowers In Evap. Unit?	No.	Nom. C.f.m.	R.p.m.	Net Weight	Water Usage Gpm/ton
HCF304AR	Finned Coil	Air	1.33	4	F-22	...	Yes	Yes	...	1	Permanent	11¾x22¾x½	Yes	2	550	1700	230	...
P20F	Finned Coil	Air	1.88	3	F-22	...	Yes	Yes	...	1	Permanent	12¾x23¾x½	Yes**	1	900	1075	440	...
P30F	Finned Coil	Air	3.06	3	F-22	...	Yes	Yes	...	1	Permanent	14x30x1	Yes**	1	1200	1075	500	...
HCS250A	Finned Coil	Air	...	...	...	(2) 2# 13	Yes	Yes	...	...	...	...	...	...	...	...	305	...
§2U30-50	...	...	2.35	3	F-22	1	Yes	...	...	...	...	...	...	...	...	...	110	...
HCS353A	Finned Coil	Air	...	...	...	(2) 3# 12	Yes	Yes	...	...	...	...	...	...	...	...	410	...
§3U30-50	...	...	3.54	3	F-22	...	Yes	...	...	...	...	...	...	...	...	...	120	...
CA20	Finned Coil	Air	...	...	...	...	...	Yes	...	...	...	...	...	...	...	...	380	...
CW20	Counterflow	Water	...	...	...	...	...	Yes	...	...	...	...	...	...	...	...	305	1.5
§2UX	...	...	2.35	3	F-22	...	No	...	...	...	...	...	...	...	...	...	105	...
CA30	Finned Coil	Air	...	...	...	...	...	Yes	...	...	...	...	...	...	...	...	485	...
CW30	Counterflow	Water	...	...	...	...	...	Yes	...	...	...	...	...	...	...	...	313	1.5
§3UX	...	...	3.54	3	F-22	...	No	...	...	...	...	...	...	...	...	...	108	...
HCS500A	Finned Coil	Air	...	...	...	...	...	Yes	...	...	...	...	...	...	...	...	600	...
CW50	Counterflow	Water	...	...	...	...	...	Yes	...	...	...	...	...	...	...	...	385	1.5
§5UX	...	...	5.0	3	F-22	...	No	...	...	...	...	...	...	...	...	...	145	...
HCS750A	Finned Coil	Air	...	...	...	...	...	Yes	...	...	...	...	...	...	...	...	770	...
CW75	Counterflow	Water	...	...	...	...	...	Yes	...	...	...	...	...	...	...	...	420	1.5
†75DX	...	...	8.75	3	F-22	...	No	...	...	4	Disposable	16x20x1	...	...	...	...	155	...
R2Y	Shell & Tube	Water	2.60	3	F-22	1# 13	Yes	Yes	...	1	Disposable	20x20x1	No	1	...	...	352	3.1
R3Y	Shell & Tube	Water	3.82	3	F-22	1# 14	Yes	Yes	...	1	Disposable	25x25x1	No	1	...	...	450	4.5
HC11F	...	Water	1.18	...	F-22	1# 12	Yes	No	...	1	Disposable	12x14x1	Yes	1	500	1050	130‡‡	1.6
HC152F	...	Water	1.77	...	F-22	2# 4	Yes	No	...	1	Disposable	12x21x1	Yes	1	700	1050	184‡‡	2.3

§Upflow only. Also available in down and horizontal flow. *Also available without reverse cycle. †Horizontal flow only. ¶With panel and fan package. These are sealed refrigerant circuits for special application. ††With optional blower. **Also available without blower. ‡‡ Not including blower.

Optional 'Rough-Ins'

Southern Calif. Group Pushes for Loan Agencies, Builders To Encourage Provisions for Future Home Cooling

LOS ANGELES — Southern California is assuming national leadership in two vital steps toward a complete breakthrough in the field of residential year-round air conditioning, Robert N. Hall, president of the Institute of Heating & Air Conditioning, declared here recently.

Hall said the two steps were as follows:

1. Offering optional "rough-ins" for future refrigeration systems by contractors and builders to new home customers at relatively moderate extra cost.

2. Increasing interest by loan companies in protecting their long range home mortgage investments by encouraging such "rough-ins" and, in one case at least, making them mandatory for loans on better homes.

'Rough-In' Defined

A "rough-in" is a forced air heating system designed to add future air conditioning. This requires proper sizing of ductwork, construction of such ducts, sizing of registers, and proper return air systems.

Hall, who recently predicted that Southern California air conditioning installation would run 400% ahead of the national increase rate if nothing unforeseen occurs, called the steps initiated by the builders and loan agencies "greatly encouraging."

1 Contractor Gets 99% Response

Hall disclosed that one general contractor in the San Fernando Valley, one of the warmer summer areas, has had 99% acceptance from new home customers on air conditioning "rough-ins." Where similar offers were made by a loan association to tract home buyers in a different area, acceptance ran about 20%.

Arthur E. Neelley, vice president, California Federal Savings & Loan Association, said there is a definite trend by local institutions to require air conditioning "rough-ins" on all homes in excess of $20,000 in warmer areas as a matter of protecting their investment.

"We think that in time air conditioning will be a requirement in all houses," he declared.

Neelley said three new branch offices built by California Federal recently were completely air conditioned. "We wouldn't be without it," he added.

Plant Size Doubled

ROSSMOYNE, Ohio—Ellis & Watts Products, Inc. here has more than doubled the size of its plant, it was announced recently. Plant space, with the new addition, totals over 17,000 sq. ft.

This is the company's second expansion in its five-year history of designing and building custom air conditioning units.

Mobile Television Studio Has Cooling

MIAMI, Fla. — When the Orange Bowl Parade, Orange Bowl Game, and similar outdoor extravaganzas or news events take place in the Miami area, station WTVJ's big mobile TV studio is usually parked close to the scene of action.

The truck-studio — billed as "the world's largest on wheels" —houses all the controls and monitor screens utilized for the remote telecasting of major Miami events, many of which are of nationwide interest.

Particularly important to the mobile studio's technical crew, the truck is equipped with its own central-type air conditioning system. An Airtemp 3-hp. waterless condensing unit is attached to the trailer's underside.

Inside the studio compartment, a horizontal fan-coil unit is attached to the ceiling. A series of overhead diffusers provide the entire trailer with uniform comfort cooling.

LOCATED at the rear of a truck, this special steel cradle holds the 3-hp. condenser.

INTERIOR view of Station WTVJ's mobile TV studio—showing telecasting equipment.

Station officials report that one reason for selecting the waterless system was that it requires a small amount of space. Once a mobile unit has been outfitted with all required broadcasting equipment and worker space provided, little room remains for the installation of air conditioning. Consequently the equipment must be compact.

The officials add that in addition to comfort for operators, the air conditioning system also provides cooling for the large amount of heat-producing equipment enclosed in the trailer.

For more information about products advertised on this page use Information Center, page 66.

Detroit Air Conditioning Sales

'56 Installations Soar 63% over '55 with Record 2,449; All-Time High Set In July with 442 Units Installed

By Robert E. Lacey

DETROIT — Air conditioning installations rocketed over a previously unexplored peak here last year.

A total of 2,449 packaged air conditioners and condensing units for remote systems was installed during 1956—a leap of 950 over the 1,499 units which broke all previous Detroit records in 1955. This was 62.7% higher than 1955.

Greatest single factor contributing to this gain was the unprecedented number of residential air conditioning units installed here. There were 252 homes air conditioned in Detroit in 1956 compared with 139 the preceding year and just 17 in 1954. A total of 337 units were installed in the 252 homes, leading to the conclusion that zone air conditioning was the mode with some contractors.

Data on the installations was obtained by AIR CONDITIONING & REFRIGERATION NEWS through a check of installation permits issued by the city's Department of Buildings and Safety Engineering. Figures apply only to the city of Detroit proper; installations in suburbs are not included. However, it is thought the Detroit figures probably represent about two-thirds or more of metropolitan area jobs.

The Detroit figures do not include window units except for a few installations in hospitals, small commercial establishments, etc., where the law requires permits and inspections.

Information obtained from the permits has been tabulated five ways: 1) sales by month for the years 1953 through 1956, 2) sales by size for 1954 through 1956, 3) sales by make for 1956, 4) sales by contractor for the last year, and, 5) where the installations were made in 1955 and 1956.

July, 1956 Biggest Month In History

In the table analyzing installations by month for the last five years, it will be noted that July, 1956 with 442 jobs installed was not only the biggest month of the year but was the largest in Detroit's history. In addition, the 347 in June broke all previous monthly records, topping August, 1955 which had 313 jobs. August with 294 and April and May with 279 and 278 installations also smashed all previous Detroit records except August, 1955 when they jumped over the 257 of July, 1953.

In all, there were nine months in 1956 when installations reached or topped 100. Besides those already mentioned, March had 197, December, 142, February, 128, and September, 100.

Only "low" month was November with 65 installations, compared with 82 in January and 95 in October. Installations held fairly well to a pattern throughout the year.

5-Hp. Unit Continues To Lead Field

Tabulation showing installation by size for the last four years since 1953 indicates that the 5-hp. unit continues to be the leader. The 812 units of 5 hp. represent about one-third of the total of 2,449. This figure also is considerably higher than the previous high of 513 5-hp. units listed in 1954. In addition, the 518 3-hp. units listed moves ahead of the former 5-hp. high.

Although biggest numerical gain from 502 to 812 was registered in 5-hp. units, those under 3 hp. also jumped considerably from 160 in 1955 to 356 last year. One large factor noted in the gain in units of less than 3 hp. is that some contractors made a practice throughout the year of installing two 1-hp. or two 1½-hp. units in residences.

Sharp Rise Noted In 7½-Hp. Bracket

A sharp increase came in the 7½-hp. unit bracket. It rose from 290 in 1955 to the second high of all-time Detroit history, booming to 560. Units of 10 hp. rose from 49 to 81—a sizable increase — those of 15 hp. dropped back from 34 to 22, but 20-hp. units tripled from 10 in 1955 to 30 last year. Doubled in number was the 25-hp. size, from 12 to 23; 30 hp. fell off from 10 to 5; 40 hp. also slid from 12 to 8; 50-hp. units near-

(Continued on next page)

Where Air Conditioning Was Installed In Detroit In 1955 and 1956

ESTABLISHMENT	1955 NO.	1955 HP.	1956 NO.	1956 HP.
Abstract company	....	....	1	10
Advertising agency	2	8	11	123
Airline ticket office	....	....	1	10
Airline office	2	10	2	32½
Apartment house	2	127½	10	68
Appliance store	....	....	4	25½
Armored Car service	....	....	3	65
Assembly hall	....	....	9	212
Auditorium	....	....	1	235
Auto club	1	3	2	17
Auto rental office	1	7½	1	5
Auto sales room	19	147½	11	77½
Bakery	3	13½	7	67
Bank	28	286	15	357½
Banquet room	1	3	3	27½
Barber shop	9	34½	13	69½
Barber supply office	....	....	2	12½
Beauty parlor	21	83½	14	74½
Beauty school	1	10	1	12
Beer store	1	3	7	21
Belt company office	....	....	2	25
Benevolent society	....	....	4	77
Blueprint shop	....	....	1	12½
Board of education	1	3	1	15
Bookstore	....	....	3	13
Bowling alley	3	47½	7	120
Boy's store	....	....	2	7½
Brass company	....	....	1	32½
Brewery	1	8	2	45
Brick company office	1	7½	3	15
Bridal shop	2	8	5	25
Building contractor	1	5	5	32½
Bus driver's dorm	1	5	....	....
Busines organization	....	....	1	20
Cafeteria	1	3	5	65
Camera shop	....	....	4	12
Candy store	1	2	4	14
Carpeting store	....	....	4	35
Caterer	....	....	2	17½
Cheese maker	....	....	1	15
Chemical company	....	....	1	25
Child's wear shop	1	3	1	7½
Church	3	148	11	266½
Cigar store	....	....	2	12
Clinic	18	86½	14	112½
Clothing store	8	40½	12	115
Club	6	75	16	98
Coal company	1	3	2	10
Commercial (unspecified)	208	629½	254	1768½
Confectionary	1	5	2	7
Conference room	1	10	3	27½
Construction company	....	....	2	15
Control room	....	....	1	10
Convent	1	17½	1	12½
Credit Union	....	....	1	17½
Dairy bar	1	5	4	12
Dairy office	1	3	6	62
Dance studio	5	21	7	45
Decorators	....	....	2	17½
Delicatessen	2	10	4	14
Dental office	2	8	8	27
Department store	7	227	11	165
Dime store	2	50	12	325
Die casting company	....	....	6	65
Doctor's office	28	113	32	177½
Doughnut shop	....	....	4	20
Drafting room	....	....	3	18
Drapery shop	1	3	3	11
Dress shop	9	98½	12	112½
Drug manufacturer	1	81½	1	40
Drug store	30	147	37	218
Dry goods store	3	25	6	32½
Engineering office	....	....	5	42½
Eye clinic	1	7½	....	....
Factory or factory office	60	519	43	625
Film studio	....	....	2	18
Fire station	....	....	1	12
First aid room	....	....	2	8
Florist	2	8	3	15
Food wholesaler	....	....	3	25
Foundry	....	....	1	30
Funeral home	6	26½	6	55
Fur store	....	....	2	15
Furniture store	14	180	23	147½
Gas company	....	....	1	64
Gift shop	1	3	1	5
Hall	5	27½	2	22
Hardware store	2	12½	5	15
Health club	....	....	3	25
Hobby shop	....	....	3	17½
Hospital	30	126	9	146
Hospital operating room	1	5	3	17½
Hotel	7	140	11	425
Importer's	....	....	1	10
Insurance office	5	45½	16	85
Investment office	1	5	16	118
Jewelry store	4	30	3	22½
Laboratory	4	50	6	50
Language school	1	5	....	....
Laundry	1	5	2	15
Law office	1	5	5	25
Leather goods store	....	....	2	8
Library	2	35	1	20
Life insurance company office	....	....	4	30
Linoleum store	1	10	....	....
Liquor distributor	1	5	....	....
Loan company	7	47½	17	132½
Luggage shop	2	20	....	....
Lumber company	1	5	5	27½
Market	32	563½	43	712
Masonic temple	1	3	2	12
Meat market	....	....	3	11
Mausoleum	....	....	1	10
Men's store	7	38	6	82
Metal products office	1	27½	....	....
Metal shop	2	7	....	....
Millinery shop	....	....	2	10
Motel	2	35	2	15
Music store	....	....	1	5
Newspaper office	....	....	2	25
Nursery	....	....	2	23

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For more information about products advertised on this page use Information Center, page 66.

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ESTABLISHMENT	NO.	HP.	NO.	HP.
Office	184	1,934½	109	1,172½
Office equipment sales	1	10	....	....
Oil company office	1	50	....	....
Packing house	1	5	....	....
Paint company office	1	10	....	.....
Paper company office	....	....	3	20
Pattern company	....	....	3	32
Peanut company	1	17½	....	....
Pharmaceutical house	....	....	1	50
Pharmacy	....	....	3	13
Photo-engraver	....	....	....	....
Photo laboratory	....	....	5	28
Physiotherapy room	1	1	....	....
Plumbers	....	....	1	5
Police station	1	25	....	....
Pool room	....	....	1	5
Post office	....	....	1	55
Poultry processing	....	....	....	....
Printer	1	5	9	85
Public building	....	....	6	275
Radio repair shop	....	....	1	2
Radio studio	2	10	4	255
Railroad office	1	5	....	....
Reading room	1	5	....	....
Realty office	5	21	5	20
Record distributor	1	15	....	....
Record shop	1	3	....	....
Recreation room	1	7½	1	5
Reducing salon	3	17½	1	7½
Residence	139	392½	252	924½
Restaurant	85	658	94	896
Rubber company office	1	60	....	....
Salt company office	1	4	2	15
Sausage manufacturer	1	3	....	....
Scalp clinic	1	3	....	....
School	1	3	1	8
Service organization	....	....	8	122½
Shoe store	14	79½	8	36
Showroom	1	5	9	52
Sign company	1	3	2	7
Soup company	1	3	....	....
Sporting goods store	1	5	....	....
Sportswear store	....	....	....	....
Stamp company	....	....	4	42
Stamping company	....	....	2	15
Stationers	2	10	....	....
Steamship ticket office	....	....	....	....
Steel company	1	22½	8	35
Storm window sales	....	....	1	10
Storage	1	5	2	18
Store	18	227	18	284
Supply company	1	3	....	....
Surgical supplies	1	5	....	....
Tabulating room	....	....	....	....
Tailor	1	5	....	....
Tavern	69	448	60	445
Tax office	1	7½	....	....
Telephone office	3	22½	1	55
Telephone answering service	....	....	1	5
Television school	....	....	1	35
Theater	3	23	8	685
Tile company	....	....	3	15
Tool company	3	28½	8	72½
Trailer sales	1	7½	1	10
Trucking company office	2	8	5	35
Typesetting shop	1	80	1	35
Union hall	1	45	4	38
Union office	....	....	8	68
University	1	30	1	75
Utility office	1	25	1	15
Veterans organization	....	....	2	17½
Veterinarian	....	....	....	....
X-Ray laboratory	1	3	....	....
Yacht club	1	5	8	65
TOTAL	1,216	9,009½	1,605	15,321

Installations by Hp.

SIZE IN HP.	1954	1955	1956
Under 3*	89	160	356
3	272	410	518
5	513	502	812
7½	262	290	560
10	53	49	81
15	21	34	22
20	14	10	30
25	8	12	23
30	7	10	5
40	13	12	8
50	12	6	11
60	2	1	3
75	...	2	8
100	...	1	4
Over 100	...	...	8
TOTAL	1,266	1,499	2,449

*Includes only those units for which installation permits are required by law.

Detroit Sales--

(Continued from preceding page)

ly doubled in installations from 6 to 11; 60's went from 1 to 3; 75's from 2 to four times that at 8; 100-hp. units moved from 1 to 4; no units of over 100 hp. were installed in the last two years, but 1956 also saw an upturn in the huge sizes. One gigantic installation of 235 hp. was made, one of 175 hp., and six 125-hp. whoppers were installed during the year.

The 2,449 installations in 1956 represent 15,321 hp. for an all-time record high. The 1,499 jobs in 1955 were figured as 9,009½ hp. The previous record for Detroit, however, was the 13,581½ hp. installed in the city in 1953 even though only 1,223 units were involved.

Comparison by Make

Listed in another table is a comparison of 1956 Detroit installations by make. A total of 51 different makes are represented. This is a gain of nine over the 42 listed in 1955 and obviously is the result of more newcomers entering the air conditioning industry.

The nine makes which may be considered as newcomers to the field, representing about 20% of the 51 makes involved, garnered a total of 107 installations or 4.3% of the 2,449 jobs. One of these, however, is credited with 49 installations; another with 29.

First Four Makes Run Fairly Close

At the top of the list is Make No. 1 with 440 units and 3,051 hp. Not too far back is Make No. 2 with 389 units and 2,193 hp. Closely following is Make No. 3 with 361 installations and 1,757 hp. A little farther back is Make No. 4 with 310 units and 1,909 hp. There's a considerable drop to Make No. 5 with 209 installations and 967½ hp. Another slide is registered by Make No. 6 with 143 jobs, but a surprising 1,515½ hp.

At the low end of the list are 13 makes with one unit each; three with two each; six with four each; and three with five each.

There is a fairly close correlation between number of units and total horsepower among the top makes, although it is noted that Make No. 4 has more horsepower than Make No. 3 with 51 fewer units and Make No. 6 ranks fifth in horsepower with 66 less units than No. 5.

In the middle range, however, fairly wide differences show up in comparing units and horsepower of various makes. Make No. 14, for example, has 30 units and 86 hp. while Make No. 18's

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Detroit Cooling Installations--

(Concluded from preceding page)

15 units represent 316 hp.

Four top makes, incidentally, with 440, 389, 361, and 310, respectively, far surpass the 1955 leader which had 279 units installed.

Breakdown of installations according to contractor shows that 106 different contractors installed air conditioning in Detroit in 1956. This compares with 89 last year and 75 active in 1955.

Top contractor in 1956 installed 239 units, which represented 1,651 hp. Leading contractor in 1955 was credited with 117 units, while the leader the proceding year had 157.

Four other contractors, with 207, 158, 155, and 142, topped the 1955 leader's 117. Fourth installer in 1956 nipped right at the 1954 leader's 157 with 155.

The 1956 tabulation shows that contractor No. 2 had 207 units for 1,149 hp.; No. 3 had 158 units for 811 hp.; No. 4 had 155 units for 283 hp.; No. 5 had 142 units for 787½ hp.; and No. 6 had 99 for 1,219½ hp.

At the opposite end of the list we find 20 contractors with one unit installed apiece, 13 with two each, eight with three each; and four with four each.

The pattern of the top 10% of the contractors doing half the business still holds true for the 1956 Detroit installations.

Top 10 contractors in 1956, representing 10.6% of the total, installed a combined total of 1,351 units for 55% of the total.

Comparing installations of the contractors in 1956 there is less correlation between number of units and equivalent horsepower than with the makes. Contractor No. 1 does have the most horsepower with 1,651, but there is considerable variation in this respect among most of the others listed.

Final tabulation of the Detroit air conditioning data shows, as far as possible, the type of establishment where the units were installed in 1955 and 1956.

This shows that 1,605 different establishments had air conditioning installed in 1956, compared with 1,216 in 1955 and 1,122 in 1954.

"Commercial" classification is largest with 472 units and 1,768½ hp. "Offices" ran second with 344 units and 1,172½ hp. Total installations in offices actually ran considerably more than this, as can be noted in table which specifies the type of office wherever this data is listed on the permits.

Of particular importance is the evidence that residential air conditioning really boomed in Detroit in 1956. A total of 337 units were installed within the city limits for a surprising 924½ hp. This represents a decided increase over the 139 installations in 1955 and a gigantic step over the 17 of 1954.

Other big buyers of air conditioning in 1956 included restaurants with 144, factory offices 136, taverns 87, markets 68, banks and physician's and dentist's offices 34 each, and drugstores 32.

Monthly Installations

MONTH	1953	1954	1955	1956
January	28	42	50	82
February	42	38	45	128
March	61	107	102	197
April	76	105	73	279
May	171	186	144	278
June	124	153	166	347
July	257	237	218	442
August	215	152	313	294
September	74	104	181	100
October	64	80	92	95
November	65	33	43	65
December	46	29	72	142
TOTAL	1,223	1,266	1,499	2,449

Installations by Makes

MAKE	NO. UNITS	HP.
1	440	3051
2	389	2193
3	361	1757
4	310	1909
5	209	967½
6	143	1515½
7	75	547
8	69	149
9	59	357
10	49	823½
11	35	107
12	33	227½
13	31	106
14	30	86
15	29	81
16	19	136½
17	17	37
18	16	56
19	16	197
20	15	316
21	10	40
22	8	27
23	8	38
24	7	31
25	7	25
26	6	26
27	5	21
28	5	17
29	5	140
30	4	20
31	4	20
32	4	11
33	4	16
34	4	10
35	4	22½
36	2	2
37	2	8
38	2	10
39	1	3
40	1	3
41	1	3
42	1	3
43	1	3
44	1	175
45	1	3
46	1	5
47	1	3
48	1	5
49	1	5
50	1	3
51	1	3
TOTAL	2,449	15,321

Contractor Ratings

CONTRACTOR	NO. UNITS	HP.
1	239	1651
2	207	1149
3	158	811
4	155	283
5	142	787½
6	99	1219½
7	98	492
8	95	440
9	91	377
10	69	556½
11	66	303½
12	58	1134
13	55	1238½
14	52	174
15	47	181
16	46	510
17	44	347
18	43	265
19	40	230
20	39	207½
21	39	193½
22	37	295
23	33	264
24	30	100
25	29	87
26	27	105
27	24	253
28	17	89
29	15	86
30	15	75
31	14	60
32	13	56
33	13	39
34	12	36
35	11	63
36	11	92
37	10	30
38	9	19
39	9	18
40	9	47
41	9	55
42	9	67
43	9	30
44	9	48
45	9	58
46	8	36
47	8	16
48	8	24
49	7	35
50	7	14
51	6	18
52	6	12
53	6	30
54	6	12
55	6	57½
56–61	6 at 5	@ for 175
62–65	4 at 4	@ for 44
66–73	8 at 3	@ for 355
74–86	13 at 2	@ for 93
87–106	20 at 1	@ for 54
TOTAL	2,449	15,321

Air Conditioned Mice

KYOTO, Japan—A two-story air conditioned apartment house, mouse size, is being constructed by Kyoto university. It is believed that the mice, used for medical research purposes, will multiply more rapidly in the comfortable atmosphere.

For more information about products advertised on this page use Information Center, page 66.

Assembly Line, Unusual Techniques Used In Repairing Window Units

New York Firm Employs Elaborate Test Panel To Diagnose Units

NEW YORK CITY — Assembly line methods that include unusual devices and techniques permitting fast but accurate diagnosis and service are major claims made for its window unit repair station on E. 138th St. here by Franchised Refrigeration & Air Conditioning Corp.

Roller conveyers, an elaborate test and diagnosis panel, unique refrigerant weighing scales that read "backwards," automatic welders, and a fully instrumentated run-in test room are among the features employed by the firm, which is owned and operated by Henry Ehrens, Sidney Weiner, Ed Casper, and Morton Baum.

These four have long been associated in Franchised Refrigeration's parent firm, Technical Refrigeration, and the latter's other subsidiary, Sealed Unit Parts Co., Inc., manufacturer of replacement part for hermetic units and a rebuilder of same.

Handles Out-of-Warranty Repairs of All Makes

Besides performing in-warranty service on Mitchell, Servel, Coolerator, and Emerson Electric window units, Franchised handles out-of-warranty repairs of all makes for dealers and contractors on a wholesale basis. Outside service and installation are also available from Franchised on a wholesale basis.

Most elaborate and expensive station along the 120-ft. roller conveyer line at Franchised is the very first one—the master electrical test panel. Designed and built by Ehrens, this represents an investment of $1,200 in materials alone plus two months of labor, he says. Beside it is another test panel to check the efficiency of the refrigerant cycle of a unit.

Master Panel Permits 'Almost Every Conceivable Check'

The master panel permits almost every conceivable electrical check to be made on a unit of either 115-volt or 230-volt single-phase design. Four different receptacles in the panel fit most types of plugs used on conditioners, and adapters are provided to accommodate the rest.

Electrically the panel board is split two ways, providing either low amperage and wattage or high amperage and wattage. The low range extends up to 10 amps. and 600 watts; the high range goes up to 50 amps. and 3,000 watts, according to Ehrens.

Each of the four ammeters and wattmeters wired in these circuits is protected against overloads due to shorts by an individual circuit breaker. These four meters are mounted across the top of the master test panel.

A fifth meter mounted at the top of the panel in the center is a voltmeter which registers the line voltage at the receptacle of the unit being checked.

Other features of the master panel permit tests of capacitance, high potential breakdown, relays, etc.

An unusual arrangement of the panel permits the high potential check to be made simply by turning on a switch while the window unit is plugged into the board. This can shoot up to 1,500 volts into the unit.

Various running tests can be made on the unit also. The 50-amp. meter, for example, will show starting current and locked rotor current. The 10-amp. meter is intended to indicate running current.

"It's necessary to have these two ammeters to get an accurate reading of the running current," Ehrens explains. "Scale on the 10-amp meter is much more finely divided than that of the 50-amp. meter."

If a unit won't start, it is necessary to go over the entire electrical system. The master test panel is equipped to do just that. The ohmeter, for example, permits tests of the separate run and start circuits of the unit as well as continuity. A capacitance tester is employed to check the running and starting capacitors of a unit.

Coils of potential relays can be checked for continuity and cut-in and cut-out points. This is accomplished with a variac.

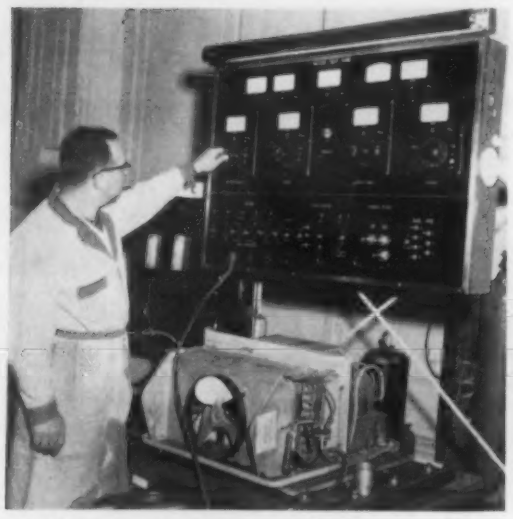
Provision is also made at the test panel for starting a unit which refuses to budge even though all the electrical components seem okay. This section of the panel can start either 110-volt or 230-volt units, using a three-wire test cord and three pushbuttons which make a convenient substitute for the almost countless number of relays that would be required.

The starting button is of the momentary contact type. The running circuit button is actually a magnetic starter with a holding coil. Its circuit is broken only when the "off" button is pushed.

COMPLETE test and repair equipment on conveyer line of Franchised Refrigeration & Air Conditioning Corp., New York City, permit rapid servicing of in-warranty and out-of-warranty window air conditioners for the trade.

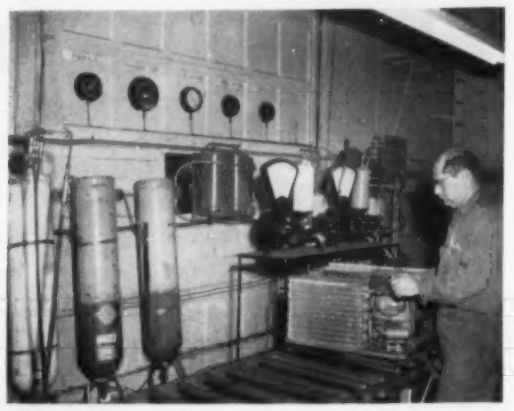
A series of four toggle switches permits cutting in starting capacitors of 50, 75, 150, or 200 m.f.d. or any combi-

(Continued on next page)



ELABORATE panel designed and built by Henry Ehrens above has many features which permit quick tests and diagnosis of all electrical problems that may be encountered with a window unit. Flow meters at left also permit check on efficiency of compressor.

WORK stations along Franchised's conveyer line are provided with turntables, work benches on casters, welding torches (with automatic lighting) on swivel mounts, as well as electrical outlets and connections for discharging and leak test charging.



CHARGING repaired conditioners is done by weight instead of volume to insure accuracy regardless of ambient temperature through scales changed to read "backwards," i.e., register amount of refrigerant charged into units out of 8-lb. cylinders attached to scales.

Repairing Window Units--

(Continued from preceding page)

nation thereof. Beside these are three toggle switches for running capacitors of 5, 10, or 15 m.f.d. of any combination of these.

Can By-Pass Capacitators

Capacitors can be by-passed by throwing another toggle switch. The low scale amp. and wattmeters, incidentally, are protected by circuit breakers so that in case the by-pass switch is overlooked, these meters won't be damaged by surges of starting current.

Wired into the master panel also are three resistors of 3, 6, and 12 amps. so that these or any combination thereof can be cut in series with any outlet to check for continuity and any shorts.

Located beside the master test panel are flow meters to check the efficiency of the pump itself. Ordinarily, though, this check is made only on units that fail to pass the hot room tests at the end of the rebuilding and repair operations.

Continuing along the roller conveyer line, one notes there are several turntable sections provided so that a unit can be easily turned around to work on it.

Units Move on 2 Ft. Sq. Pallets

The units move along the conveyer on 2-ft. square pallets made of ¾-in. plywood. Provided also are five transfer tables mounted on casters for moving units to and from the conveyer. These transfer tables are tilted slightly down toward the back so that in the event of a sudden stop the unit won't roll off.

This tilt also simplifies getting units on and off the conveyer despite slight differences in floor levels throughout the length of the conveyer. The conveyer, of course, is level throughout, but the floor isn't.

A hand-operated hydraulic lift is used for transferring units from trucks to the tables or conveyer. This is on casters, too, as are several work "benches" so that they can be easily moved to where they're needed.

Three welding stations are located along the conveyer line. The torches are suspended from pipes mounted in a swivel arrangement so that they can swing out over the line for brazing but be pushed back against the wall out of the way when not in use. Automatic lighting of the torches speeds operations because the oxygen-acetylene mixture can be pre-set and maintained constantly without the usual adjustments required when lighting the torches.

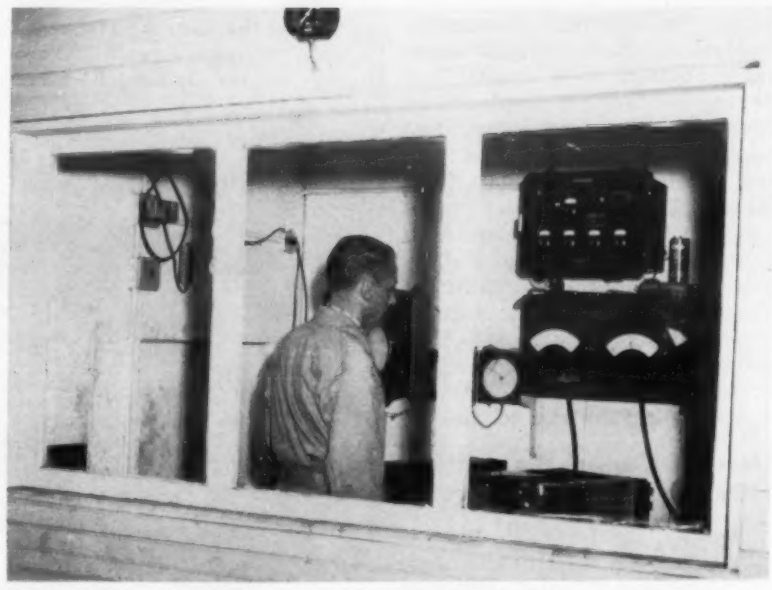
Spotted along the conveyer frame are 31 electrical outlets for operating the units as required, each outlet being protected by its own circuit breaker. Both 110 and 230-volt outlets are provided, the latter being marked in red.

Use 2 Methods To Discharge Units

Franchised employs two methods of discharging units. It is sometimes simplest, Ehrens points out, merely to place the unit in the paint spray booth, turn on the booth exhaust fans, and discharge the unit here.

Along the conveyer line, however, there are located valves and a line tied into a high volumetric capacity refrigeration compressor (capable of pulling 29 in. of vacuum) for discharging a unit to the atmosphere.

Before entering this compressor the discharge line passes through a "freeze trap" to separate out sludges and moisture that might damage the compressor pulling the vacuum on the discharge line of the unit.



REPAIRED units go through run-in tests under watchful eye of Ed Casper in room held at 90° to 95° and 70% r.h. Recording instruments check amperage, temperature difference across evaporator, and operating pressures under these peak load conditions.

Preliminary Leak Tests

Preliminary leak tests on a repaired conditioner are made by filling the system with a combination of refrigerant-12 and dry carbon dioxide under 275 p.s.i.g. pressure. Testing is done with a halide torch. For a final leak test, however, a G-E electronic "snifter" is employed.

It is along this section of the conveyer that all the work necessary is done on the unit under repair whether it be repairing of leaks, installing new fan motors, etc.

Obvious leaks detected in this section of the line are repaired but not checked at this point. This would slow down operations. Any leaks that might still remain will be caught at the final check made with the electronic detector.

This is one of the things, Ehrens, says, that makes Franchised's line so flexible that it can be operated efficiently by one mechanic or six.

Following repair and initial leak testing, the unit must be completely evacuated prior to charging. This is accomplished in two stages, first the unit is pulled down to 1,500 microns vacuum and then in the second stage down to 50 microns.

Vacuum for the first stage is provided by a two-stage system consisting of two high volume refrigeration compressors that can pull five window units down to 1,500 microns in 30 minutes, according to Ehrens. Final evacuation is accomplished with a Kinney pump, which will pull five units down to 50 microns in 30 minutes.

Franchised runs the conditioners during evacuation, which reduces time of evacuation to about one-fifth that required otherwise, the company states.

"Running the unit while evacuating is a controversial subject," Ehrens admits, but he comments that "we have done this successfully on thousands of units without running into any difficulties with shorts."

(Generally speaking, electric current will jump across terminals, etc., much more easily in a vacuum than at atmospheric or higher pressure.)

"A terrific amount of refrigerant, as well as air and moisture, is often trapped in oil, but this along with air and moisture will be quickly released from the oil if the unit is operated during evacuation," Ehrens explains.

Changes Hoses on Final Vacuum Switch

When changing from the "rough" or first-stage vacuum operation to the "deep" or final vacuum, Franchised changes hoses rather than simply turning valves. The vacuum hoses each have individual valves at the outlet to prevent any air getting into the lines.

Next step is to charge the unit. Both refrigerant-12 and refrigerant-22 are available, being supplied out of 145-lb. drums which are heated by electrical strip heaters to 10° above the room ambient temperature to provide sufficient pressure to force the refrigerant into the unit.

(Concluded on next page)

For more information about products advertised on this page use Information Center, page 66.

Window Units--

(Concluded from preceding page)

Charge by Weight

"We charge by weight rather than volume because varying ambient temperatures can affect the volume but have no effect on the weight of the refrigerant," Ehrens indicates. "This is extremely beneficial to units whose charge is extremely critical."

Scales used to measure refrigerant charges are accurate to within ¼ oz. They have been revamped considerably, however, to Franchised's specifications.

"Our problem," says Ehrens, "was to measure refrigerant being removed from the drum into the unit, but all scales as usually designed measure weight being added."

First step in redesigning the scales (there's one for refrigerant-12, another for refrigerant-22), was to remove the original platform and weld an 8-lb. capacity refrigerant cylinder in place of the platform.

Next step in revamping the scales was to reverse the reading scale so the numbers ascend from right to left instead of from left to right as is customary.

Scales Show How Much Refrigerant Charged

Mechanism of the scales is counterbalanced so that when the cylinder has a full 8 lbs. of refrigerant in it, the hand points at "0." Thus, when refrigerant is charged from this cylinder into the unit, the scales show exactly (to ¼ oz.) how much has been charged into the system.

After each charge is made, the scales are tared back to "O." Actually, the scales register up to 4 lbs. only, but they can be tared back to "0" twice, permitting the cylinder on the scales to start out with a full charge of 8 lbs.

Paint Units Before Testing

If a unit has to be painted, it goes directly to the spray booth after receiving its charge before being subjected to test in the hot room. By painting before testing, the delay of letting the condensate dry off the evaporator following the unit's test operation is eliminated.

Units are tested to peak design load in a special room that is held at an ambient temperature of between 90° and 95° F. and a relative humidity of approximately 70%.

Thermostatically controlled electric heaters maintain the temperature while vaporizing "pots" which are controlled by humidistats maintain the relative humidity.

Type of Tests Made In Room

Test room can accommodate three 110-volt conditioners or two 230-volt units at the same time. Here with the unit running, tests are made to determine the amperage, temperature difference across the evaporator, and operating pressures. Recording instruments are employed to make these checks.

Also in the hot room is a Select-Ray unit which can simultaneously take temperature readings at five different points of a unit. This is employed to check units that have intermittent troubles.

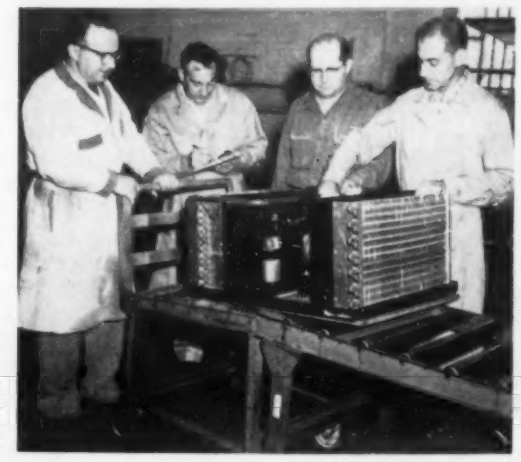
Next to the hot room is the leak test room. Here the final step is to check a unit for leaks with a G-E electronic leak detector.

To avoid contamination of the air and possible false readings of this sensitive instrument, fresh outside air is forced into this small room under positive pressure in the ductwork.

Absence of leaks means the unit is ready for removal and sealing off of test valves and for return to the dealer or contractor who originally brought it in. A unit, of course, has to pass the checks in the hot room before being sent along to the final leak test.

If leaks should be detected at this final stage, the unit is sent back through the line once again for discharge, repair, evacuating, charging, testing, and final leak detection.

ELECTRONIC leak test by Morton Baum in room pressurized with outside air is final check of unit repaired at Franchised. A leak detected here sends the unit back through the line for discharge, repair, evacuating, charging, test run, and final leak test once again.



WITH the four partners of Franchised looking on—Ehrens, Sidney Weiner, Baum, and Casper—a finished unit is moved from conveyer to transfer table for shipment to dealer or contractor.

HYDRAULIC lift simplifies shifting of units from trucks to transfer tables of conveyer line, thus helping speed operations.

For more information about products advertised on this page use Information Center, page 66.

National Industrial Service Association

500 To Hear Frame Motor Rewinding Problem Talks at May 12-15 Meeting

ST. LOUIS — Discussions on new developments in insulation, problems of rewinding pre-NEMA frame motors, shop management, plant layout and equipment, taxes, electronics, and salesmanship will highlight the 24th annual convention of the National Industrial Service Association, Inc. at the Hotel Statler in Buffalo, May 12-15.

More than 500 representatives of the 1,500 NISA member shops are expected to attend, in addition to several hundred wives, associate members, and guests.

NISA is the trade association of electric motor, generator, and transformer service and sales shops in the United States, Canada, Mexico, Cuba, and the British West Indies.

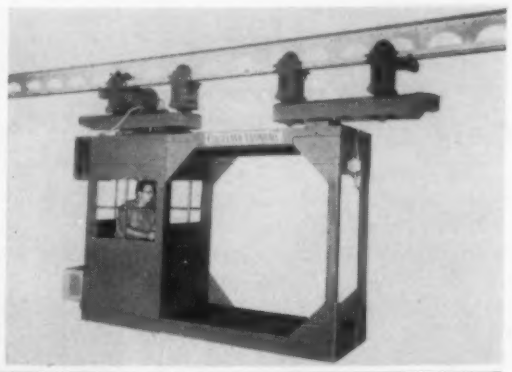
Brig.-Gen. (Ret.) Henry Z. Lang of Lang Electric Co., Buffalo, is general chairman of the convention.

The keynote speaker will be Rob Roy MacLeod, vice president of Niagara Mohawk Co. of Buffalo.

Other speakers scheduled to address the opening day session on Monday morning, May 13 include: Dr. Jack Wilson of Louis Allis Co., Milwaukee, whose topic is "Insulation Trends"; Robert B. Turner of Johnson-Turner Electric Repair & Engineering Co., Ltd., Windsor, Ont., Can., who will talk on shop management; and George Larsen of Larsen-Hogue Electric Co., Los Angeles, who will discuss transformers.

Speakers at the Tuesday morning session will include the NISA national Vice President Alfred Elson, Jr. of New England Machine & Electric Co., Pawtucket, R. I., who has chosen the subject "Don't Expect Yesterday's Tools To Do Tomorrow's Work"; Robert O. Swados, attorney from Niagara Falls, N. Y., who will discuss taxes, insurance, and legal problems faced by electric motor service shops; V. R. Murphy of Reliance Electric & Engineering Co., Cleveland, whose topic will be industrial electronics; and a newly-elected NISA director, Ben Horton of Atkinson Armature Works, Pittsburg, Kan., whose talk will be entitled "Streamline the Repair Shop with an Eye toward New Fields."

On Wednesday, speakers will be Lloyd Young of Hydro Electric Power Commission of Ontario, who will talk on Canadian power developments; Clair Dean of Buffalo Electric Co., Buffalo, who will discuss personnel practices and customer relations; NISA National Secretary Paul M. Sievert of Sievert Electric Co., Chicago, who will discuss NISA's new visual training program; and Fred Powers of Century Electric Co., St. Louis, whose talk will be called "How To Win That Sale."



AIR CONDITIONED carrier for operation on overhead tramrail systems, designed for conveying ladles of hot metal used for die casting, made by Cleveland Tramrail Div., Cleveland Crane & Engineering Co., Wickliffe, Ohio. Its aluminum-enclosed cab is provided with cooling for the operator and safety switch that prevents the unit from being moved when door is open.

A new member of the NISA staff, Joseph M. Harrington, assistant to the executive vice president, will review the services performed for members by the St. Louis national headquarters of the organization.

Informal discussion groups will be held on Monday and Tuesday afternoons. On Monday the delegates will have a selection of subjects covering management, small shops, winding materials, and transformers. On Tuesday, the discussions will include the topics of equipment and plant layout, taxes and insurance, industrial electronics, and large shops.

Moderators of the Monday discussion groups will include Arthur Bamford of Sutherland-Schultz Electric Co., Ltd., Kitchener, Ont.; Frank Ross, the NISA national treasurer, of Ross Electric Motor Shop, Fairmont, Minn.; H. C. Blenkhorn, NISA director, of Blenkhorn & Sawle, Ltd., St. Catherines, Ont.; and James Phares of Southwest Electric Co., Oklahoma City.

The Tuesday discussion leaders will include Joseph B. Wagner, newly-elected NISA director, of Wagner Electric Service, Philadelphia; Larry Nelson of M. H. Salmon Electric Co., Inc., Syracuse, N. Y.; John Overton, NISA director, of Electric Motor & Repair Co., Richmond, Va.; and Ross Sawle of Blenkhorn & Sawle, Ltd., St. Catherines, Ont.

CHOICE OF 3 TOURS

On Wednesday afternoon, May 15, chartered buses will take the delegates to their choice of three tours. One tour will take the shop owners to Buffalo area electric motor service firms; another will offer a sightseeing trip; and a third trip will take the conventioners to the Buffalo manufacturing plant of Westinghouse Electric Corp.

The convention will also meet for three social events, including a reception for NISA President Charles J. Covington, of Dowzer Electric Machinery Works, Mount Vernon, Ill., on Sunday night, May 12, at the Statler; a dinner and entertainment at a local restaurant on Monday night; and a dinner at the Statler on Wednesday night to conclude the activities.

TUESDAY EXHIBIT

Forty-five exhibits of manufactured products will be shown at the convention. A "night" for these firms, many of them associate members of NISA, will be held on Tuesday.

Winners of the association's annual shop ideas contest will be announced at a lunch and business meeting to be held on Tuesday, May 14.

Information about the convention may be obtained from the organization's national headquarters, 818 Olive St., St. Louis 1, Mo.

For more information about products advertised on this page use Information Center, page 66.

Imaginative Engineering Helps

Contractor Installs 24 Heat Pumps In 90-Day Period In Washington D. C. Area

WASHINGTON, D. C.—In a 90-day period last summer, Stern, Brenner & Arey Enterprises, Inc. installed 24 heat pumps in and about Washington, D. C.

When that was accomplished, Homer Arey, president, nearly doubled the number of heat pumps previously installed in this area.

New installations included 10 units in a new shopping center, five in an old house in Georgetown formerly owned by Senator Robert Taft, two in lumber yard offices, and seven in a new office building.

All of the units are air-to-air heat pumps manufactured by the Mathes Co.

Arey attributes his success in selling the heat pump largely to excellent cooperation and interest on the part of the local utility, the Potomac Electric Power Co. The utility also affords favorable rates for heat pump operation.

Arey, who combines formal engineering training with eight years of air conditioning sales experience, brings to his job careful supervision of installations and imaginative engineering.

Roof Installations

As an example, the 10 heat pumps for the new Reney-Kensington (Maryland) shopping center are mounted on the roof, so that no floor space is taken up.

They are also mounted directly above the space they cool, thus spreading the load on the roof and permitting short duct runs from the units to the conditioned space.

The units provide a total of 41 tons of cooling through six 5-ton units, three 3-tons, and one 2-ton.

5 Units Used In Taft's Old Home

In Senator Taft's old home, three 5-ton units and two 3 tons provide zone heating and cooling over three floors. Use of multiple units also greatly simplified the ductwork required, Arey said.

Arey has also found a way to apply the heat pump to the "row" house, whose tall, narrow, brick fronts line many a D. C. street in solid rows.

In such an installation last spring, he suspended a 2-ton Mathes unit on the outside of the building beneath a second-story rear window. Mounted on steel beams, it saves badly needed space inside the house.

Neighbor Not Bothered

Although the unit is within a few feet of a neighbor's window, it is reported to produce no objectionable noise. Exhaust air is blown directly to the rear, away from the window.

The house has four rooms and bath spread over a 1,000-sq. ft. area. Heat loss is calculated at 33,000 B.t.u. at 0° F.

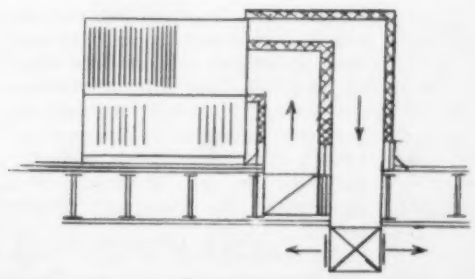
The heat pump cost only 20% more than a hot water baseboard heating system, it was reported, and provides air conditioning as well as heating. This in addition to saving inside space that would have been used for the hot water boiler.

Another installation of which Arey is proud is the air conditioning and heating of the concession building at the "world's largest" drive-in theater in Hyattsville, Md., just over the D. C. line.

The Queens Chapel Drive-In theater boasts a screen 105 ft. wide and parking space for 1,600 cars. It also has two audio units for each car—for stereophonic sound.

Another feature is a section near the concession building with regular theater seats for patrons who did not drive or are weary of sitting in cars.

SUPPORTED ON STEEL BEAMS beneath a second story window of a Washington, D. C. row house, this 2-ton heat pump works year around without disturbing the neighbor whose window is next to unit.



HOW ROOF-MOUNTED heat pump works to cool a new Maryland shopping center. Mounted directly above the space to be conditioned, the unit is positioned to permit extremely short duct runs.

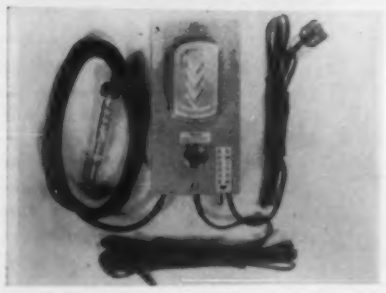
The concession building is also on grand proportions, measuring 120 by 108 ft. A low, one-story, flat roofed structure, it is heated and cooled by five 5-ton "Weathertron" heat pumps set at the rear of the building. One handles the rest rooms exclusively. The other four cover parallel zones of selling area through ceiling diffusers.

One of the features of the heat pump that particularly appealed to the management, according to Arey, was its completely automatic operation. This was important to the owners because almost all of the employes are unskilled. They wanted a system that required as little attention as possible.

Heating and cooling thermostats mounted on pillars midway in the selling area control operation of the compressors.

Another factor that helped clinch the sale, Arey noted, was that the utility offered to install a power substation free if the heat pump was used.

For more information about products advertised on this page use Information Center, page 66.



Automatic Alarm Warns Of Unsafe Temperature

———KEY NO. G-3383———

WYNCOTE, Pa. — A self-contained automatic alarm unit that is claimed to instantly sound a warning buzzer when an unsafe temperature is reached in refrigerators, freezers, and blood banks was recently developed here by Mack Electric Devices, Inc.

Called "Thermo-Alarm," the unit permits a 24-hour maintenance of constant safe temperature and correction of temperature changes.

It plugs in to any 110-115-v, 60-cycle outlet, has optional fail-safe remote telephone hookup in addition to 115-v. a.c. remote signal feature. It contains a sensitive thermostat pre-set to desired temperature, enclosed in hermetically sealed, frost-free tube placed in cabinets or near material to be protected, the company pointed out.

A temperature change causes the thermostat to activate the operating mechanism which in turn sounds warning buzzer. Thermo-Alarm is contained in a metal 3 by 3 by 5¾-in. box. Thermostats are factory calibrated to specified temperatures from -10 to 300° F.

Auto Cooler Odor Controller Offered

———KEY NO. G-3384———

NEW YORK CITY — Airkem, Inc. has developed an odor controlling material for automotive air conditioning.

Combining "Airwick" odor control product with a gel base to produce a slowly evaporating solid, offers a solution to the odor problem, the company said. When the air stream of an air conditioner passes over the gel, volatile ingredients of the gel mix with the air. When there is an odor, these ingredients work to counteract it.

Airkem kit for installation in one make of car, contains a can of gel, mounting plate, and length of rubber hose. Suction developed in the air conditioner draws air into the gel can, over the gel through the air hose, and into the conditioner for distribution.

In other type of auto unit, a cartridge of gel is secured to the cooled air outlet by means of a bracket. Cooled air passing over the gel carries the odor-control.

Pyramid Volt-Ammeter Permits Selection

———KEY NO. G-3385———

LYNBROOK, N. Y. — A completely new snap-around volt-ammeter, RS-1 "Amprobe," has been introduced by Pyramid Instrument Corp. here.

Having built-in recessed range-selector which permits selection of any one of four amps and two voltage ranges by a flick of the thumb, the Amprobe has only one current scale or voltage scale visible at one time. This is said to up speed of reading and minimize chance of error in the reading.

New features include a magnifying-glass covered dial, a longer needle sweep, a "Pointer-Lock" to lock needle in place when taking a reading in a difficult location, bayonet voltage leads that lock-in at bottom for quick connecting, impact-proof case that won't chip or crack with non-slip ribbing to give firm pistol-grip, advanced printed circuit construction, and shielded core magnet movement of the unit.

Amprobe RS-1 can be used for current measurement without cutting conductors, the company said. It is utilized for balancing circuits, tracing faults and grounds, and operates as an aid in estimating new or revised distribution circuits and diagnosing operating troubles without shutting down equipment or premises, the firm explained.

A pocket-size snap-around volt-ammeter, the Amprobe comes equipped with fitted leather case that can be hooked on the serviceman's belt.

It sells for $39.85 complete, it was added.

Add-On Evaporator Coil Introduced

———KEY NO. G-3386———

WICHITA, Kan.—A new "add-on" evaporator coil assembly for installation with 2 or 3-ton systems which may be applied to all horizontal, upflow, counterflow, and low-boy furnaces having adequate air handling capacity for summer air conditioning was announced here by Coleman Co., Inc.

Consisting of a direct expansion fin and tube coil set at an angle in an insulated metal cabinet, the new universal unit has outer dimensions of 26¼ in. width, 25⅛ in. depth, and 25 in. height.

Coil is 24 rows high, three deep, and has a face area of 4.32 sq. ft., the company stated. Aluminum fins are spaced 12 per inch. Condensate pan has been designed for fast run off and minimum re-evaporation.

Openings for conventional or small-pipe systems may be cut in either the top or sides of the cabinet, it was noted. A removable panel provides easy access for inspection and servicing, the firm said.

The manufacturer also has a complete line of plenum cooling units specifically designed for use with the firm's "Trim-Boy" furnaces, both upflow and counterflow models.

Information Center

For *more information* on What's New products, current literature and catalogs available, equipment advertised in AIR CONDITIONING & REFRIGERATION NEWS use Key Numbers where designated or specify products advertised and we'll see that you receive this information promptly.

Products Advertised
(list name, page, and issue date)

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What's New or Current Literature Available

Key No. ..... Key No. .....

Key No. ..... Key No. .....

Key No. ..... Key No. .....

Key No. ..... Key No. .....

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450 W. FORT ST. DETROIT 26, MICHIGAN

For more information about products advertised on this page use Information Center, page 66.

Remote Condenser Unit Has Low Silhouette

——KEY NO. G-3379——

CHICAGO—Rheem Mfg. Co. recently unveiled its new 5-ton "Rheemaire" low-silhouette remote condenser unit standing only 31 in. high.

A 3-hp. compressor combines with the "Air-Film" condenser so the model delivers 60,000 B.t.u.h. cooling under standard ASRE conditions, the company said.

Cooling is effected in the home by cooling coils in the furnace plenum or through a supplementary unit containing horizontal flow coil, blower, and filters.

In retail establishments, Rheemaire will provide cooling from ceiling-mounted units containing evaporator coil, blower, and filters. Condensing unit can be mounted on the roof of a single-story building, or mounted on brackets attached to a wall in multi-story structures.

Copper condenser surface is covered by a thin water film to increase heat removal rate, it was stated.

RCA-Whirlpool Offers 12-Model Freezer Line

——KEY NO. G-3380——

ST. JOSEPH, Mich.—Pace setter of the 12-model freezer line introduced for 1957 by Whirlpool-Seeger Corp. is the 12-cu. ft. "Mark VII" vertical unit which is said to achieve the built-in look without custom installation.

In the line are seven vertical and five chest freezers with capacities ranging from 420 to 700 lbs. Net storage volumes vary from 12 to 20 cu. ft.

"Imperial" 20, 16, 12-cu. ft. Imperial Mark XII, and the Mark XII vertical freezers feature roll-out baskets for meat and fowl, slip-out can racks for frozen soups and juices, and tilt-out ice cream bin. Adjustable door shelves are designed to accommodate frozen food packages, while open-grid gates hold items with each in full view, the company explained.

Constant zero-cold is maintained throughout the entire freezer cabinet by an air circulating system set in the door. All models except Mark XII with four have five quick-freezing surfaces, including the top liner. Available with either right or left hand doors, the units have automatic disposal system which directs defrost water through a tube to a special evaporator pan below.

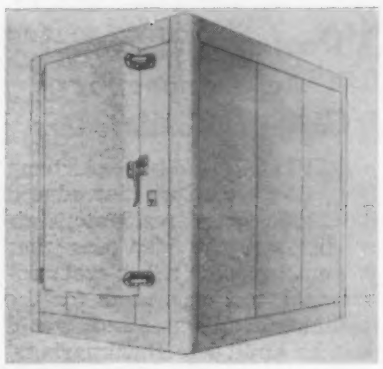
Net shelf area of the 20-cu. ft. vertical is 20.27 sq. ft. Dimensions are 65½ by 34 by 34¾ in. The 16-cu. ft. model has 16.8-sq. ft. shelf area with measurements of 65½ by 34 by 32⅛ in. Mark XII's have 13.67-sq. ft. shelf area and dimensions of 59 by 30¾ by 32 in.

Three "Custom" freezers include a 19-cu. ft. unit with 21.1-sq. ft. shelf area which measures 72½ by 36½ by 31¾ in. A 15-cu. ft. unit with 17-sq. ft. shelf area has dimensions of 68½ by 29½ by 31¾ in. The new 12-cu. ft. Custom vertical has 16.06-sq. ft. shelf area and measures 59 by 30¾ by 32 in.

Imperial chest freezers have a blast-freeze fan which is said to force zero-cold air through a fast-freeze basket. It is controlled by a pushbutton at front and a light signal when it is in operation. Removable dividers separate the chest into sections.

The 20-cu. ft. Imperial model has dimensions of 37 by 70⅜ by 33⅛ in. A 15-cu. ft. unit measures 37 by 54⅞ by 33⅛ in.

In addition, there is a 20-cu. ft. Custom chest freezer which measures 78½ by 37 by 31¼ in., a 16-cu. ft. model with dimensions of 65⅜ by 37 by 33¼ in., and a 12-cu. ft. unit the same size except it is 52¼ in. long.



Walk-In Freezers Feature Expandability

——KEY NO. G-3381——

INDIANAPOLIS — Elliott-Williams Co. here recently developed a larger bulk storage unit for frozen food, the manufacturer announced.

A new line of walk-in freezers 5 ft. 8 in. by 5 ft. 8 in. to 60 by 20 ft. or larger was introduced. Constructed of small interchangeable panels, it is possible to expand the size of this equipment or change its location easily, the company said.

Available in aluminum alloy, stainless steel, and natural anodized aluminum finishes, the walk-in has overlapping of super freezer door equipped with electric heater element.

Electrostatic Filter Is Water Washable

——KEY NO. G-3382——

HOUSTON, Texas — A permanent, electrostatic, water washable filter for use in heating or air conditioning systems is being manufactured by the Perma-Fil Mfg. Co. here.

Made in aluminum framed or pad types, the filter is claimed to have an efficiency range of 90 to 98%, with 99 to 100% efficiency on ragweed pollen.

At a resistance of .50 in. of water, a 2-in. "Perma-Fil" filter will hold about 2 lbs. of dust.

The filter pad is made of animal hair chemically treated to eliminate odor and then treated with Dow "Saran" plastic for permanency. Without the plastic treatment, it is available as a "throw-away" filter with a life of two seasons.

The permanent filter can be cleaned by spray or rinse water. A mild detergent can be used when oil or grease accumulates. Lint may be removed with a vacuum cleaner.

The filter is available in thicknesses of ½, 1, or 2 in. Pad-type filters measuring 10 by 24 by ½ in. and 15 by 24 by ½ in. are stocked by all distributors, the manufacturer says. Either size may be cut to fit any window air conditioner, he notes.

Lath base is of steel copper plated and then galvanized. It not only holds the filter pad in place but catches 80% of the lint, the manufacturer asserts.

Throughout this issue are pictures of many new products shown at the Heating and Air Conditioning Exposition. Additional picture coverage of the show also appeared in the March 11 issue.

Whirlpool-Seeger Adds Lines

Birtman Merger OK Would Change Name To Whirlpool Corp.; Nets $13,808,294

ST. JOSEPH, Mich.—The annual report of Whirlpool-Seeger Corp. covering the first full year of operations ended Dec. 31, 1956, has been mailed to stockholders. It shows net sales of $368,220,975 and net earnings, after taxes, of $13,808,294.

The report was accompanied by a proxy statement of a proposed merger with Birtman Electric Co., Chicago, and notice of a special meeting of Whirlpool-Seeger stockholders at Chicago, March 29, at 10 a.m. in the Sheraton hotel to vote on the merger.

If the merger is approved the surviving company will be Whirlpool-Seeger Corp. and its name will be changed to Whirlpool Corp.

Under the new set-up, it was reported, Sears Roebuck & Co. would own, directly or indirectly, 430,410 shares, or 7% of Whirlpool common stock, and RCA would own 1,158,563 shares, or 18.97% of the common shares of the surviving company.

SEARS GROUP WOULD OWN 17% OF COMMON

However, including the shares owned by Sears, the "Sears group" will own 1,027,107 shares, or 16.8% of common and 55,878 shares, or 26.2% of 4¼ cumulative convertible preferred stock of Whirlpool, it was understood.

The "Sears group" reportedly includes Sears, its wholly-owned subsidiaries, Allstate Insurance Co. and Allstate Fire Insurance Co.; the savings and profit-sharing pension fund of Sears Roebuck employes; the Sears Roebuck Foundation and the Allstate Foundation.

REFRIGERATION, COOLING SALES ARE 28% OF NET

The proxy statement of the proposed merger of Birtman Electric into Whirlpool-Seeger indicated that sales to Sears Roebuck accounted for $218,401,467 of Whirlpool-Seeger's net sales last year. The statement also revealed that 62% of Whirlpool's 1956 net sales were contributed by laundry equipment; 28% by refrigeration and air conditioning; and 10% by all other lines.

Highlights of the Whirlpool-Seeger annual report for 1956 are the following:

Net sales	$368,220,975
Net earnings after taxes	$ 13,808,294
Per share common stock	$2.25
Percent of net sales	3.75%
Dividends paid	$ 8,866,008
Per share common stock	$1.40
Per share preferred stock	$3.40
Taxes	$ 18,290,284
Per share common stock	$3.14
Stockholders' equity	$ 96,445,267
Working capital	$ 55,912,571
Property, plant and equipment. Net at year-end	$ 70,024,661
Expenditures for property, plant, and equipment during year	$ 20,312,299
Provision for depreciation	$ 5,743,299
Shares common stock outstanding	5,822,252
Shares preferred stock outstanding	213,159
Shareholders common stock	10,917
Shareholders preferred stock	2,714
Employes	16,664
Extraordinary pre-production and make-ready costs:	
Before taxes	$ 9,022,508
After taxes	$ 4,330,804
Per common share after taxes	$.74

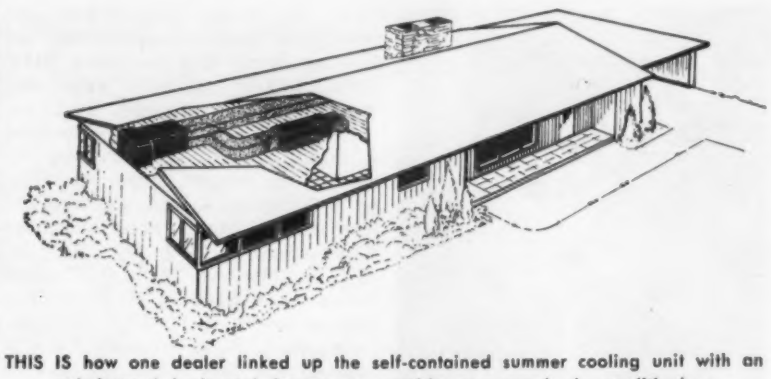
(Concluded on next page, col. 5)

Dealers Find Special Applications for Compact Conditioners

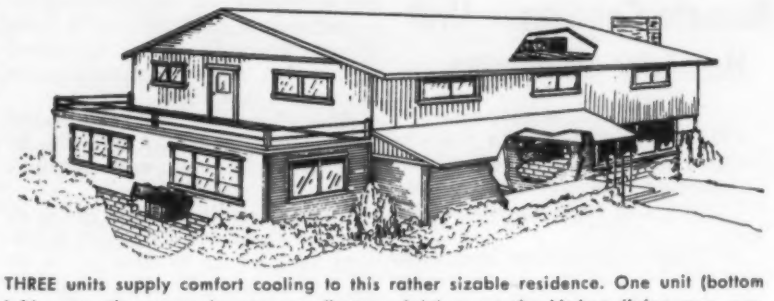
DAYTON — When Airtemp Div., Chrysler Corp. introduced its 1100 series residential air conditioner, the idea was that it would provide a low-cost central-type cooling system for the medium-size home, and would just be limited to that market.

But some enterprising dealers in the field weren't content to limit themselves to applying this unit to the medium-size home and conventional attic installations. They began installing the unit (or multiples of it) in all kinds of home, and even in frozen custard stands.

They sent drawings and descriptions of their installations to the factory, which has made a slide film of them from which the accompanying pictures are taken.



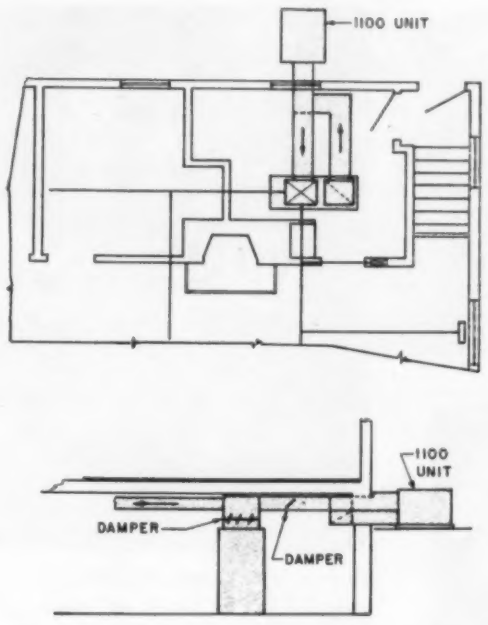
THIS IS how one dealer linked up the self-contained summer cooling unit with an attic-located horizontal furnace to provide year-round air conditioning.



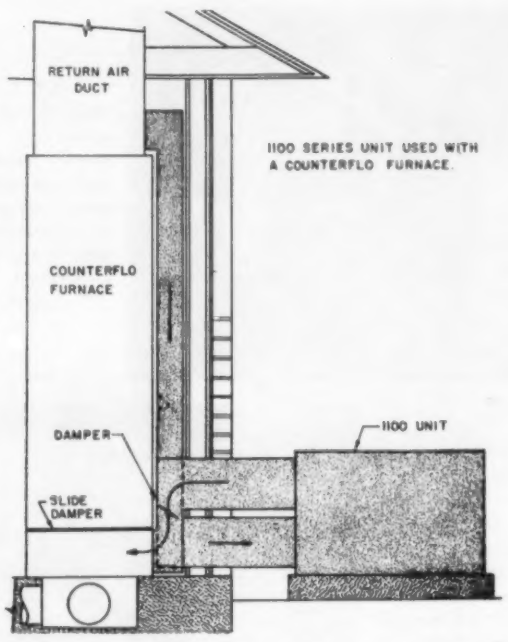
THREE units supply comfort cooling to this rather sizable residence. One unit (bottom left) serves the sunporch area, one (bottom right) serves the kitchen-dining room section, and another (upper right) handles the second floor bedrooms.

For more information about products advertised on this page use Information Center, page 66.

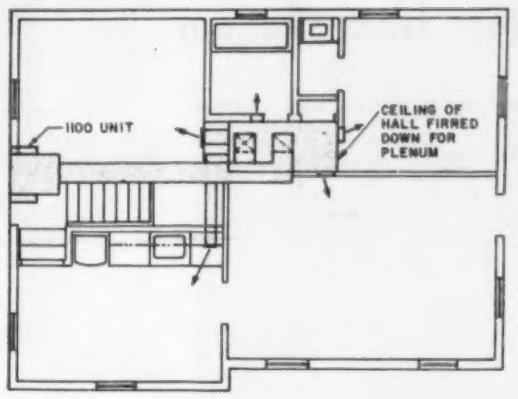
Residential Air Conditioning



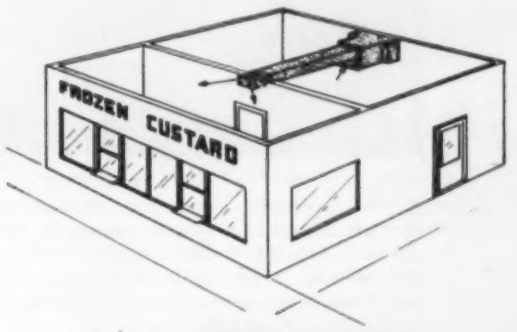
OUTSIDE installation of the unit connecting through to ductwork and combining with a low-boy furnace installed in the basement of an existing home was method of this job.



DAMPER arrangement made possible this installation (with unit outside the house) in home equipped with a counter-flow type furnace.



"PULLMAN HALLWAY" type of installation has conditioning unit in the attic with ceiling of hall for plenum and registers stubbed off to each room.



SIMPLE installation handles the area in a frozen custard stand in which there will be people.

OLDER, TWO-STORY home was cooled by using attic ducts connected with risers placed in the corner of rooms as shown. Risers were decorated to blend with adjoining halls.

for Customer Satisfaction

Features All-Angle Operation

STANDARD AM-4 RATINGS

Totally Enclosed
Any Position Mounting

115V • 60 CYCLES • 4-POLE • 1550 RPM • ALL-ANGLE OPERATION

Model Number	Watts Output	AMPS	A ±3/64	Hi Impedance Protected	Duty		Weight Lbs.-Oz.	Notes
					Fan	Mechanical		
*AM-4000J	1.5	.30	2 45/64	YES	YES	YES	2-2	1. All standard model numbers are clockwise rotation facing shaft end of motor. Opposite rotation supplied on request. 2. All motors comply with U. L. and C. S. A. electrical design standards.
*AM-4001J	4	.44	2 45/64	YES	YES	NO	2-2	
*AM-4200J	6	.46	2 61/64	YES	YES	YES	2-9	
*AM-4300J	9	.58	3 13/64	YES	YES	NO	3-1	
AM-4400A	12	.72	3 29/64	YES	YES	NO	3-9	
°AM-4401A	16	1.03	3 29/64	NO	YES	NO	3-9	

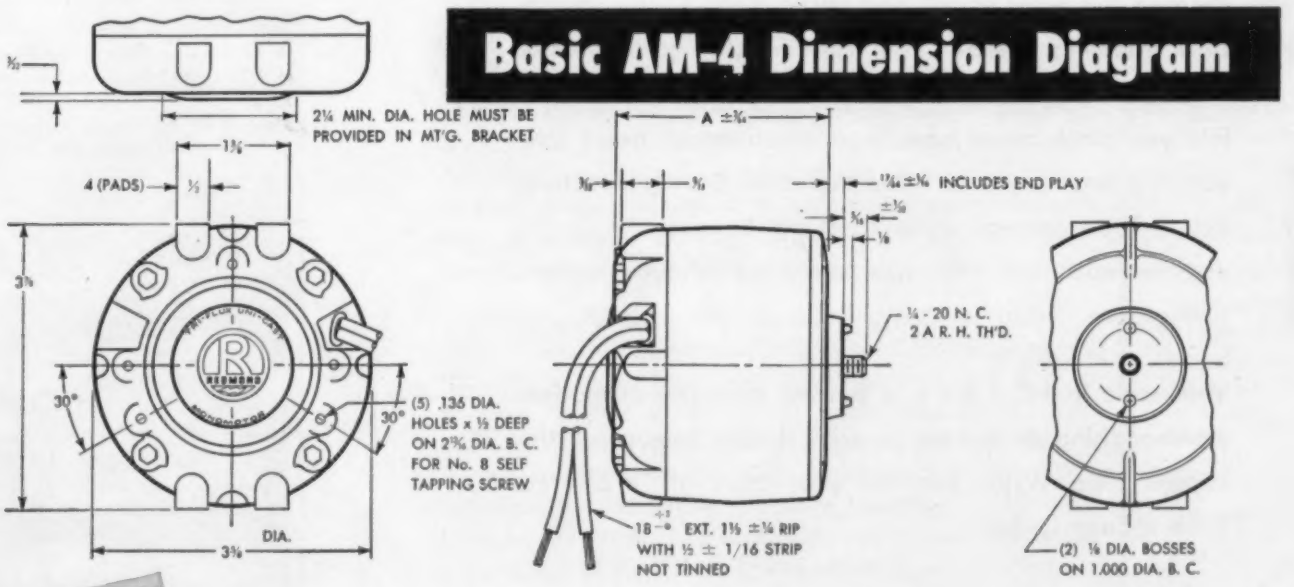
*May be operated on 50 cycles at 1300 RPM—Fan Duty—Hi-Impedance protected.
°Thermal protected.

OPTIONAL FEATURES

Motors are supplied standard as shown. Also available are other features of special stud extensions, sleeving over leads, other lead material, feed-thru switches, plugs, terminals, conduit clamps and special lubricant as required for exceedingly high and low ambient operation.

Other performance ratings for various voltages, frequencies and loads can be supplied for your product. Our sales engineers will welcome the opportunity to assist you in developing the most practical motor for your applications.

Basic AM-4 Dimension Diagram



Send for Complete Performance Data

Write the Redmond Co., Owosso, Michigan, for the "AM-4 Bulletin." At your request we will have a sales engineer call.

The Standard of Dependability

Redmond COMPANY Inc. OWOSSO, MICHIGAN

ADVERTISED IN The Saturday Evening POST

THE BIG NAME IN SMALL MOTORS

Whirlpool--

(Concluded from col. 3, preceding page)

"In 12 months the products of Whirlpool-Seeger were increased from three major appliance lines totaling less than 50 different models to 12 different appliances approximating 150 basic models.

"Here are a few of the things that were accomplished:

"We completed 599,873 sq. ft. of new construction in five of our eight divisions. We increased our engineering facilities by 35%. We expended $20,000,000 for property, plants, and equipment. We added 3,600 employes.

"Even so, the task is just begun. . . . The preparatory task was undoubtedly greater in 1956 than it will be at any future time. . . . This is reflected in the extraordinary pre-production and make-ready costs that reduced earnings substantially.

"Distributor acceptance of our new lines has been unqualified. Sales to distributors of those lines that are now in production have been beyond the most optimistic goals.

"This includes our complete laundry lines, with special emphasis on the new combination washer-dryer. It also includes room air conditioners, refrigerators, freezers, and ranges.

"At the retail level it is still too early to determine consumer reaction to all of the new lines because some of them are just reaching retail outlets."

In a section of the annual report dealing with sales and merchandising, the company stated that "RCA Whirlpool" laundry appliance sales in 1956 "reached the highest level in the span of Whirlpool products."

For more information about products advertised on this page use Information Center, page 66.

More Products from Chicago

—KEY NO. G-3365—

A 5-hp. residential summer air conditioning system, part of an extensive line of year-round winter and summer air conditioning equipment offered by Fraser & Johnston Co., is the subject of a discussion between Lou Ramos of the company (left) and Charles Woodruff of Baton Rouge, La.

—KEY NO. G-3366—

"DIRT IS NOT CHEAP" sign points up importance of keeping condenser clean. Stoddard Industries is supplying a special filter for refrigeration condensers. At left are "Dust Magnet" electrostatic filters for air conditioning jobs.

—KEY NO. G-3367—

DRIERS FOR refrigerant systems, using new Molecular Sieves desiccant, were shown by Tube Manifold Corp. In display panel at left, driers on top are for systems in the ¾-ton to 1½-ton range. Ones at bottom are for 10-15-ton range.

—KEY NO. G-3368—

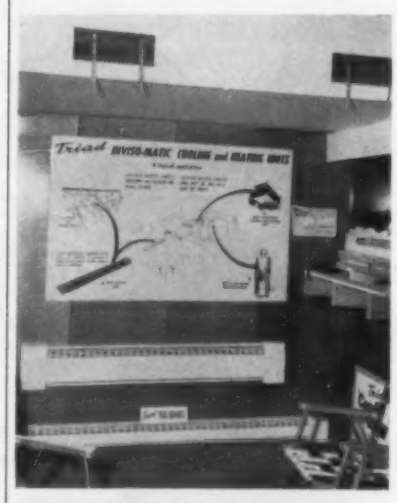
PEERLESS "CLIMA-PUMP"; all electric air-to-air heat pump, manufactured by Peerless Corp., poses with model Sandra Stuart.

—KEY NO. G-3369—

THREE-WAY solenoid valve with special by-pass feature, designed for hot and chilled water systems, is demonstrated by John Marling (right) of Jackes-Evans Co. to S. C. Segal (far left) of Kramer-Trenton Co., and I. H. Cohler of Chicago.

—KEY NO. G-3370—

NEW "RANCHO" air-cooled packaged air conditioner by Gibson Refrigerator Co., in 2-hp. and 3-hp. sizes, has special application in ranch-type homes, John Ambrose (left) of Gibson is telling Frank Early of Grapevine, Texas.



—KEY NO. G-3371—

"INVISO-MATIC" cooling and heating systems were shown by Triad Sales Corp. Units are designed to provide complete year-round conditioning in conjunction with the Triad radiant hot water heating system package.

For more information about products advertised on this page use Information Center, page 66.

—KEY NO. G-3372—
SPECIAL PURPOSE starters for air conditioning and refrigeration systems, both single-phase and three-phase, as developed and produced by the Furnas Electric Co., were on display.

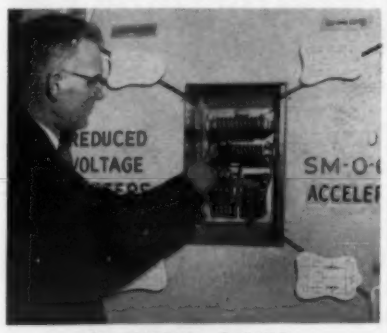
—KEY NO. G-3373—
NO SPECIAL wiring, no special maintenance problems, no tubes to replenish, are among the claims made for this "home size" electronic air filter, shown by the American Air Filter Co., Inc.

———KEY NO. G-3377———
AIRTEMP HEAT PUMP made its debut at the Exposition. As Peggy Hammer points out here, it is so designed that various principal components can be separated thus making a remote installation possible. Announcement is expected soon on sizes and availability of production models.

———KEY NO. G-3378———
CONSTANT CONDENSER air flow, regardless of wind direction, is a principal claim for this air-cooled condensing unit being offered by Southwest Mfg. Co. Vertical hot air discharge preserves nearby foliage, it is said. Looking over the unit here are O. S. McGregor, Sr., Edward Marcum, Chester Morris, and B. T. Church.

———KEY NO. G-3374———
PRESSURE REDUCING VALVE for high velocity air distribution, offered by Tuttle & Bailey, features acoustic damper, Model Pat Lee learns.

———KEY NO. G-3375———
BALANCED MOTORS and blower components, for direct or intra-drive, assure smoother, quieter operation of blowers built by Morrison Products, Inc., according to R. W. Leverenz, sales engineer for the company.



———KEY NO. G-3376———
REDUCED VOLTAGE STARTER for smooth compressor acceleration, introduced by Cutler-Hammer, Inc., is explained by Paul Erickson, branch manager of the company's Dayton office.

Looking for a Business to Buy . . . ?

Check the Business Opportunities Section in the classified advertising columns.

What Was New
At the ASHAE Show

——KEY NO. G-3340——

RESIDENTIAL combination air conditioner model CU-B3 featuring completely automatic controls was among the complete line of residential air conditioning exhibited by the American-Standard Air Conditioning Div.

——KEY NO. G-3341——

IN DEALER DISPLAY CENTER setting was York Corp.'s sealed circuit "Pathfinder" residential air conditioner, designed for quick assembly and easy installation. Air-cooled unit components are at bottom of display; above are accessories, such as "silent flow" ceiling diffusers.

——KEY NO. G-3342——

"CLEAN-IT TWINS," new tool for descaling and cleaning coils and cooling towers, are easily moved by model Holly Ray. Twins are manufactured by Hastings Air Control Co.

——KEY NO. G-3343——

TWO FEATURED items in Lennox Industries, Inc. exhibit were the All-Season Aire-Flo residential air conditioning system (at left) and the "Curtain System" of air distribution for school air conditioning systems, designed to eliminate cold walls and distracting drafts.

——KEY NO. G-3344——

NEW, COMPACT 7½-hp. "Brunner-Metic" compressor gets the attention of a foreign visitor to the Exposition, P. H. Vandenreydt (right) of Schiedam, The Netherlands. Paul Hunker of Brunner describes the model.

——KEY NO. G-3345——

ONE OF FIVE MODELS ranging from 3 to 15 tons capacity in Marley Corp.'s "AquaCooler" line of cooling towers is examined by H. S. Valentine of Kansas City (r.). A. D. Talbot, Marley sales representative, describes features.

——KEY NO. G-3346——

"DE-ICER" CONTROL for room air conditioners has been developed by Ranco Inc., and Jim Manecke, sales manager, points out operating features.

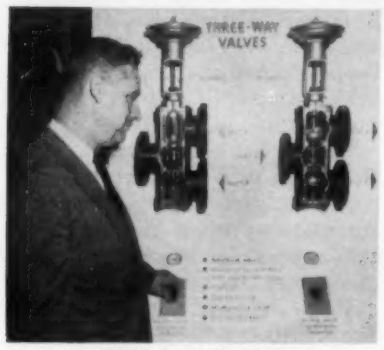
——KEY NO. G-3347——

"M-PEL-AIR" POWER EXHAUSTER with spun aluminum housing always looks bright. Model Vivian DeVine sparkles too. New power exhauster is the product of the Brookside Corp.

For more information about products advertised on this page use Information Center, page 66.

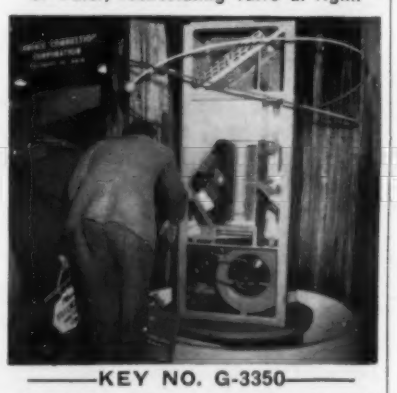
——KEY NO. G-3348——

DECORATIVE CABINETS house new residential electronic air cleaner of Trion, Inc. Richard E. Sweitzer (l.), residential sales manager, explains new vertical down-flow feature to D. P. Martin, president of Martin Distributing Co.



——KEY NO. G-3349——

E. A. HOLFORD, sales promotion department, Johnson Service Co., displays the firm's new mixing valve, on left, for steam or water; recirculating valve at right.



——KEY NO. G-3350——

DAMPER arrangement that permits straight path for the air flow from the blower through the core for cooling, and which ducts air through by-pass in heat exchanger for heating, is feature of this compact year-round air conditioner shown by Janitrol Div., Surface Combustion Corp.

——KEY NO. G-3351——

NEW HIGH PRESSURE expansion compensator for ¾-in. steam or hot water pipe, manufactured by Flexonics Corp., is explained to James A. Park (r.), of Birmingham, Mich., by E. L. Hiter, sales manager.

——KEY NO. G-3352——

NEW "WEATHERAMIC" 3-ton blower-evaporator unit, is shown by Richard Petersen, chief engineer, Utilities Div., Utility Appliance Corp., Los Angeles.

——KEY NO. G-3353——

RIGHT: New "Coolpak" 2 and 3½-ton packaged air conditioner by Century Engineering Corp. is adaptable to many types of installation, P. M. McKeon (l.), of Dubuque, Iowa hears from R. F. Considine, Century's Chicago district manager.

——KEY NO. G-3354——

NEW COMPATIBLE control panel for cooling and heating, by General Controls Corp., is discussed by Jack Croushore (l.), regional refrigeration specialist, and Robert Kyle, vice president of Hitemp Corp., Hamilton, Ont., Can.

——KEY NO. G-3355——

HOW RETURN AIR can be used and odors eliminated was shown with this Dorex 1,000 c.f.m. air recovery cell, made by Connor Engineering Corp. Pat Lee takes the "sniff" test which showed how various types of odors were eliminated.

——KEY NO. G-3356——

BIG ITEMS in the Govern-air Corp. exhibit were the model SCM-Z-8 multi-zone packaged air conditioner (at left) and the new air-cooled condenser. Viewing the models here from l. to r. are H. R. Krueger, Chas. Fitzgerald, Pat Shea, and W. H. Moler.

Reading Tube Announces Acquisition Of Mackenzie Walton In Expansion

PAWTUCKET, R. I. — Reading Tube Corp. has completed arrangements to acquire Mackenzie Walton Co. here, it was announced by Martin Mack, Reading Tube's president.

Mackenzie Walton since 1909 has specialized in the manufacture of non-ferrous seamless tubing for instruments, gauges, pressure controls, and recording equipment as well as for other applications requiring tubing "of accurate gauge and fine finish." Its employes number approximately 150.

Reading Tube, whose plants are located in Reading, Pa., manufactures copper and brass tubing for use, chiefly, in the building trades, in the air conditioning and refrigeration industries, and in appliances.

"The company has been growing rapidly, its annual sales having more than doubled since 1951 to nearly $23,000,000," the announcement said. "Its 1956 volume of business was close to the record high achieved in 1955 in spite of adverse conditions.

"In line with its policy of integration, the company has recently added a plant for production of finned tubing; and it now has under construction a plant which will insure a more continuous and economical supply of casting."

Reading Tube employs approximately 500 men and women.

No changes in personnel of Mackenzie Walton are contemplated. N. W. Fulton, vice president and manager of the plant, will continue in this capacity.

Chilled Water System Handles Variable Cooling Load In 'Church of Tomorrow'

OKLAHOMA CITY—Because of the wide variety of activities planned for the unique new Oklahoma City First Christian "Church of Tomorrow," it was necessary to install an air conditioning system capable of operating under widely variable cooling load conditions.

The church consists of three buildings—an 80-ft. high dome-like sanctuary structure, 142 ft. in diameter at ground level; a four-story circular educational building; and a music and fine arts building.

A 150-ton capacity Trane "CenTraVac" centrifugal refrigeration unit is the principal piece of equipment used in the air conditioning system for the three buildings.

The CenTraVac supplies chilled water to large capacity "Climate Changer" air handling units, which handle the requirements of various larger zones, plus "UniTrane" fan coil room air conditioners used in smaller areas.

Temperature is controlled by three-way pneumatic valves at each Climate Changer which modulate hot or cold water into the coils. No attempt was made to positively control humidity because of the comparatively short duration of time each zone is in use, the Trane Co. pointed out. However, humidity is held between 50 and 60% by maintaining the chilled water from the CenTraVac at a temperature of 42 to 43° F.

Control is entirely automatic with the exception of a manual changeover from heating to cooling. Heated water temperatures are modulated with outdoor temperatures in accordance with a pre-set schedule.

According to A. C. Menke, vice president, air conditioning and heating equipment sales of Trane, the unusual architectural design also created a problem in the selection and installation of the cooling system.

No Exposed Ducts In Sanctuary

"Early in the planning stages," Menke said, "a decision was made not to use exposed ducts for air distribution in the 2,000-seat church sanctuary. It was felt they would not be in keeping with the proposed architectural scheme of the room.

"This was solved by building the ducts into eight arches surrounding the sanctuary dome, completely hiding the duct system except for occasional grille outlets at the top."

The sanctuary building, shaped like a "beehive," is constructed of thin-shelled pre-cast concrete. It was built by putting concrete on a steel mesh laid on a wooden form, the form being removed after the concrete was fully cured.

The original design was challenged by several authorities on engineering and architecture, but elaborate tests of stress and strain, plus a 107-mile-an-hour gale have proven the dome's strength.

Stainless Steel Cap Prevents Moisture Seepage

The sanctuary is crowned by a stainless steel cap which protects the top from moisture seepage. Clear glass bubbles are set in the cap to admit light.

Directly behind the sanctuary is the four-story circular Educational building. It houses 50 class and assembly rooms plus a dining room on the ground floor. All classrooms are on the outside of the building to take advantage of natural lighting. Protection from the sun is provided by vertical louvers running completely around the building circumference.

In direct line with the sanctuary and Educational building, is the Music and Fine Arts building. Designed primarily for rehearsal and musical activities, the building provides for a "theatre-in-the-round," a dance study workshop, and adequate space for the cultivation of art appreciation through exhibits of paintings and other art forms.

The Trane air conditioning system meets the varying load requirements dictated by the intermittent use of the several buildings by automatically adjusting from 100% down to 10% capacity, it was pointed out.

R. Duane Conner of Conner and Pojenzny, was the architect and R. S. Mackenzie designed the air conditioning system. Installing contractor was the Wattie Wolfe Co. All are located in Oklahoma City.

For more information about products advertised on this page use Information Center, page 66.

What Visitors Saw at Chicago

——KEY NO. G-3332——

NEW HERMETIC LINE OF COMPRESSORS, up to 60-ton capacity, with control panel included, is introduced by Carrier Corp. Richord O. Wagoner and Don Teroller, of St. Josph, Mich., talk it over.

——KEY NO. G-3333——

9-IN-1 FLARING TOOL manufactured by Imperial Brass Mfg. Co., is examined by H. Borneman (l.), of Elkhart Products Corp., Elkhart, Ind., as J. Gillespie explains use. Gillespie holds the Imperial No. 195-FB Double Flaring Tool kit.

——KEY NO. G-3334——

DUCT INSULATION with integral liner, useable itself as a duct, is new product of Gustin-Bacon Mfg. Co. Its flexibility is demonstrated by Ingeborg Jorgensen.

——KEY NO. G-3335——

"TEMPOINT" DIAL-TYPE THERMOMETER for "taking temperature" of circulating air is new product of Bacharach Industrial Instrument Co. J. V. Palmer shows it to R. E. Shenberger.

——KEY NO. G-3336——

A NEW DESIGN FAN BLADE, that folds back over the motor for added cooling, is shown by F. M. Jacobs of Torrington Mfg. Co.

——KEY NO. G-3337——

"BEE-HIVE" CONDENSER, continuously wound, with all cooling surface on "face" of condenser, is shown by F. J. Hollerbach (l.), sales manager of Miami Products, Inc., its manufacturer, and David D. Ray (c.), Miami vice president. J. Henning, of Hart Metal Products, listens.

——KEY NO. G-3338——

HIGH PRESSURE air diffuser shown by Connor Engineering Corp. is said to provide constant volume control in dual duct design. Other features include 45° inlets, helical neoprene dampers, aircraft cable drive, and sinuous baffle. Pat Lee sits by assembly, shown in under-the-window setting.

——KEY NO. G-3339——

LEFT: New 18-in. blower marks the beginning of a program of larger blower manufacture, up to 30 in., according to H. F. Brundage, chairman of the board of the Brundage Co.

Service Contracts – *(Offering 3 Types)*

1. Three Types of Contract Offered by Contractor
2. What Policies Cover, and Approximate Costs
3. Use of Pocket Radio In Service Dispatch Work

By George M. Hanning

MIAMI, Fla.—Three types of service contracts are offered to air conditioning equipment users by Stuart Cooling Corp. here.

Stuart Cooling Corp. does service work only on service contract, Armand Cowan, president, emphasized. It will not take individual service calls.

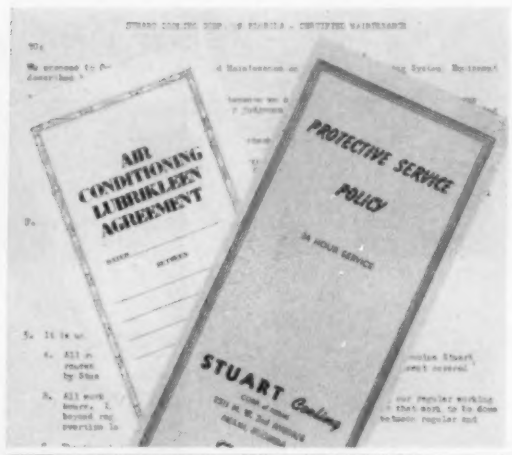
After 10 years of operation, the firm has built up a clientele of over 600 customers and keeps a staff of 14 servicemen busy the year-round.

"If we get a call for service from someone who has not previously done business with our firm," Cowan explained, "we will send a man out to survey the job.

"He will tell the owner what needs to be done to put the equipment in good operating condition as a prelude to a service or maintenance contract and what it will cost. If the owner is agreeable and will buy the contract, we will do the work.

"We handle these calls in this way, because we believe that there must be a good reason why the original installer won't give service on the equipment. It may be that the original installer is no longer in business, but most of the time it is because the owner won't pay his bills. If that is the case, we don't want his business either."

The three contracts that Stuart Cooling offers are a "Lubrikleen" agreement, a protective service (labor only) policy, and a certified maintenance (labor and materials) policy.



A CHOICE of service contract agreements is offered to air conditioning equipment owners according to what they are willing to pay. They include regular cleaning and oiling only, service labor only, or service labor and materials. Great majority of users take labor only.

Percentage by Type

About 80% of the contracts written are for the protective service policy, Cowan said. About 15% take the Lubrikleen agreement, and 5% the certified maintenance policy.

The Lubrikleen contract, as its name implies, covers only monthly oiling, greasing, and cleaning certain specified parts of the system.

Stuart servicemen will lubricate the compressor motor, blower bearings, blower motor bearings, pump bearings, cooling tower or condenser fan bearings, and cooling tower or condenser fan motor bearings. They will clean the unit drain pan, filters, cooling tower basin, and unit casing (interior and exterior).

But they perform no other service work or supply any parts under this agreement. If other service is required it is charged for at regular rates, while parts are supplied at 10% off list price.

Rate Increase by Year

The agreement is written for one year, to continue automatically from year to year at a 10% annual increase in rate unless previously terminated by either party.

Under the protective service policy, Stuart agrees to inspect, maintain, and service the equipment covered. It agrees to make a specified number of inspections each year (usually monthly) and to perform the following services at the time of inspection:

What Policy Covers

Inspect equipment for refrigerant leaks.

Repair all leaks in refrigerant mains.

Clean commutators on motors.

Clean all motor housings.

Clean lint and dirt from air-cooled condensers.

Clean condensing units.

Clean all strainers.

Adjust tension on all belts.

Lubricate all moving parts.

Clean steam traps or electric heaters.

Check and adjust dampers and air distribution.

Change over and set controls for seasonal operation.

Check operating pressures of condensing units.

Purge air from systems.

Check refrigerant in systems.

Inspect and adjust temperature controls.

Inspect and adjust safety controls.

Inspect and adjust all valves.

(Continued on next page)

For more information about products advertised on this page use Information Center, page 66.

Administering Service Contracts--

(Continued from preceding page)

Check operation of refrigerant controls.

Inspect air filters.

Clean evaporative condensers or cooling towers.

Clean drip pans.

What Labor Is Furnished

In addition, Stuart agrees to furnish all labor for repairing the present system not functioning properly due to faulty workmanship, worn out material, and defective equipment, including motors, compressors, coils, fans, piping, and controls with no additional charge to the customer.

But the contract does not include anything other than mechanical machinery. Stuart will not supply labor for ductwork, hardware, insulation, doors, floors, wells, filters, steam cleaning of coils, blowers, electrical contracting, motor winding, or perform duties of other trades not covered by its license or union.

Materials will be furnished at 10% off standard selling prices.

The contract also provides that any repairs, refrigerant, and supplies deemed necessary and recommended by Stuart for efficient operation of the owner's equipment are to be authorized by the owner.

Unless this is done, Stuart will not furnish emergency service. The owner agrees to accept the judgment of Stuart as final as to the means and methods to be employed for any corrective work.

Emergency Call Policy

In case that Stuart has to make emergency calls for any reason outside Stuart's control, the owner is to reimburse Stuart for the expense involved at current standard rates.

The contract further says that any additions, alterations, adjustments, or repairs made by others, unless authorized by Stuart, shall terminate the company's obligations. Stuart will also not be responsible for paying for service work performed or materials furnished by others.

This policy, too, is written for one year. It is continuable from year to year unless previously cancelled. Any adjustment in rates will be made at the anniversary date of the policy.

Certified Maintenance

The certified maintenance agreement obligates Stuart to regularly inspect the equipment to check its operation, and to oil, clean, and adjust it at least 12 times a year.

The company also agrees to furnish emergency service between regular inspections, make any repairs, replacements, or adjustments required to provide satisfactory operation, and to furnish all necessary repair parts, including freight, cartage, and labor to install them, and all other labor and materials.

On the other hand, the contract does not cover air conditioning ductwork; recording or portable instruments, gauges, or thermometers; insulation, electric wiring between building service and machine disconnect switches; water, drain, or waste receptacles, or traps and piping between receptacles and sewer; cleaning of water-cooled condensers more than once a year, or responsibility for maintaining the appearance of decorative casing or cabinets.

It does not include the furnishing of water treatment, or hurricane or water damage.

The contract also does not include the normal function of starting and stopping the equipment, including the opening and closing of valves, dampers, or regulators.

Protective Clause

Another protective clause in the contract states: "If we are required to make repairs and/or replacements or emergency calls occasioned by improper operation, negligence, or misuse of the equipment or due to any cause beyond our control except ordinary wear and tear you shall reimburse us for the expense incurred in making such repairs and/or replacements or emergency calls in accordance with the current established rates for performing such service.

"We shall not be required to furnish any items of equipment as recommended or required by insurance companies, government, state, municipal, or other authorities.

The contract further stipulates that the price charged is based on a specified operating schedule. If this schedule is changed, the price will be changed accordingly.

How Contract Is Written

This contract is written for five years, subject to price adjustments on anniversary dates and termination upon 30 days notice prior to the anniversary date.

Cowan asserted that the prices charged under these contracts are based on the company's own experience with the type of equipment involved. However, generally the protective service policy costs about twice as much as the Lubrikleen policy on the same equipment and the certified maintenance policy about three times the protective service policy.

Some Typical Rates

Typical monthly rates on a 3-ton air conditioner would run about $5.80 for Lubrikleen, $11.25 for protective service, and $33.50 for certified maintenance. For a 50-hp. system, they would run about $23.50, $50.50, and $140, respectively. For a 100-ton system, these would rise to $45, $95, and $270, respectively.

By working solely on service contracts, Stuart has been able to systematize the service department for highly efficient operation.

MONITORING A BROADCAST of a message to one of his servicemen, Edwin Alter, service manager for Stuart Cooling Corp., Miami, exhibits the tiny radio receiver that all his servicemen carry. They listen in once every 15 minutes to pick up any messages for them.

Service Manager Edwin H. Alter, assisted by Jane Parker, has been able to assign his men

(Concluded on next page)

Service Contracts Administration--

(Concluded from preceding page)

to specific territories in Dade county, which is the area covered by the operation.

Knowing about where they will be at each hour of the day enables him to speedily assign any emergency calls for service that may come in. It is the company's boast that within two hours of receiving a service call, a man will be on the job.

Normally a serviceman is contacted by telephone when an emergency call comes in. But, if the man should be in some location where he cannot be reached by phone, Alter has another way of reaching him.

Each serviceman carries a small pocket radio that he wears at his waist. If not near a telephone, he is instructed to listen in to the radio at least once every 15 minutes.

If Alter cannot reach the serviceman by telephone, he immediately telephones the radio paging service. The radio paging service then broadcasts a message to the serviceman, identifying him by the number of his radio receiver. The message would read for instance: "No. 161, call your office."

Alter says that he only asks the men to call the office. "We don't want to be broadcasting our business," he smiled.

The broadcast message is put on a record by the broadcasting station. The message is repeated every two minutes for 15 minutes. Messages are sent to the various receivers in numerical order. Thus, if the serviceman hears the broadcast skip his number, he knows that there is no message for him.

"The radio paging system is a wonderful time saving device," Alter testifies.

Cooling Contractor Moves, Adds Heating, Ventilating to Line

COLUMBUS, Ohio — Julian Speer Co., air conditioning contractor with offices at 101 N. High St., recently moved its headquarters to 4306 Indianola Ave., in a reorganization and expansion program which will include heating and ventilating, it was reported.

Samuel A. Shuman, graduate of Pennsylvania State university in engineering, is now associated with the firm, Speer announced. The firm recently incorporated with Speer as president, Shuman vice president.

Expansion is said to enable the company to offer a more complete service for heating, ventilating, and air conditioning in the commercial and industrial field.

Kelvinator International To Coordinate Firm's Worldwide Appliance Operations, Expand Plants

DETROIT — Formation of Kelvinator International Corp., a new wholly-owned subsidiary of American Motors, to coordinate expanding Kelvinator worldwide appliance operations, was announced by President George Romney.

"Creation of Kelvinator International represents a strong positive bid for a larger share of export markets for Kelvinator, which already ranks No. 2 among world major appliance manufacturers," Romney said.

The new company, incorporated under the laws of Delaware, will market appliance products made in the United States and abroad and will concentrate on expansion of assembly operations in other countries. In addition, Kelvinator International will coordinate new-product research, planning, and development for the export market.

'FOREIGN MARKET SATURATION LOW'

"The world appliance market in general is on the rise for a number of reasons," Romney said. "Market saturation is low, and living standards and individual incomes are improving throughout the world. Many new electric power development programs are under way. Frozen foods and air conditioning are becoming more popular in some of the more progressive countries."

Currently, Kelvinator manufactures household refrigerators and other refrigeration products at a plant in Crewe, England. A second plant, to be leased from the British government, is under construction at Bromborough, England. Both plants are operated by Kelvinator, Ltd., now a Kelvinator International subsidiary.

PRODUCTS MADE IN 11 FOREIGN NATIONS

In addition, Kelvinator products are built in 11 foreign countries: Argentina, Australia, Brazil, Colombia, France, Germany, Mexico, New Zealand, Norway, South Africa, and India.

Since 1926 Kelvinator has been a leading appliance manufacturer in Canada, it was also noted. Kelvinator of Canada, Ltd., with plants in Toronto and London, Ont., produces a wide variety of household appliances and commercial products.

MANY PRODUCTS EXPORTED

Thousands of Kelvinator and Leonard appliances built in Detroit and Grand Rapids are exported each year, Romney said.

Directors of Kelvinator International include Romney, J. L. Brown, Jr., B. A. Chapman, Howard A. Lewis, Reginald H. Line (president, Kelvinator of Canada), F. M. Maurice (managing director, Kelvinator, Ltd., England), Lawrence A. Philipp, Richard T. Purdy, J. J. Timpy, and E. H. Wilcox.

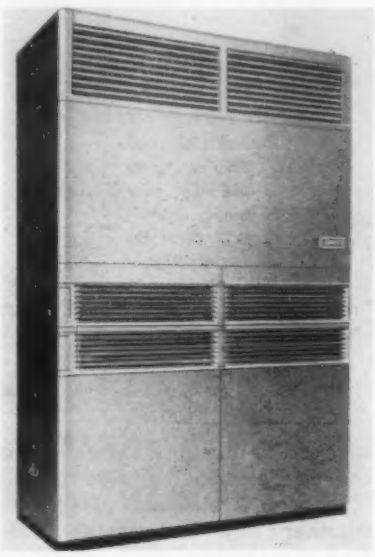
Directors have elected the following officers: Romney, chairman and president; Chapman, executive vice president and general manager; Timpy, vice president; Philipp, vice president-engineering; Wilcox, vice president in charge of Kelvinator export; Purdy, treasurer; Brown, secretary; Donald P. Else, comptroller; L. D. McGregor, assistant comptroller; W. J. Williams, assistant secretary; and Robert C. Hurd, Jr., assistant treasurer.

For more information about products advertised on this page use Information Center, page 66.

Trane Adds 10, 15-Ton Twin Refrigerant Cycle Packaged Units to Line

LA CROSSE, Wis.—Ten and 15-ton capacity units have been added by The Trane Co. to its modernized and expanded line of deluxe self-contained air conditioners for commercial and industrial applications.

Included in the complete line are 3, 5, and 7½-ton deluxe models, the new 10 and 15-ton deluxe conditioners, and 10, 15, and 20-ton commercial models for installation outside areas to be conditioned. All Trane self-contained units are factory-assembled with only minor electrical and piping connections required to put the conditioners into operation, the company noted.



NEW deluxe 10, 15-ton self-contained air conditioners have been added to Trane's commercial and industrial line. They have dual compressors and twin refrigerant cycles "for more capacity modulation."

The new, larger 10 and 15-ton deluxe units have dual compressors and twin refrigerant cycles "for more complete capacity modulation."

Hermetic compressor-motor units are installed suspended and mounted on vibration isolators. The units operate at 1,750 r.p.m.

Two cooling coils are standard and are direct expansion type with aluminum fins mechanically bonded to copper tubes. Spirally wound tube-within-a-tube condensers are used.

Spring loaded pressure relief valve is set and sealed to relieve at 300 p.s.i. for refrigerant-22.

Fans have lockseam construction housings with die-formed inlets. Wheels are statically and dynamically balanced to assure quiet operation, it was stated.

Other components included in the self-contained units are operating and safety controls, and standard 1-in. throwaway filters, it was added.

Heating coils and discharge chambers are optional equipment. Heating coil installation is horizontal allowing for vertical air flow.

Discharge chambers are equipped with four-way adjustable airfoil discharge grilles.

Would Use Serrated-Walls on 40-Story Fashion Tower To Reduce Cooling Load

NEW YORK CITY—Designs for a $100 million "new look" for the city's apparel industry were submitted to the Board of Estimate. This new look envisions a spectacular "world fashion center," according to Grover A. Whalen, chairman of the Mayor's committee which made the proposal.

A site to be bounded by W. 31st St. on the north, W. 28th on the south, and Broadway and Seventh Ave. in the center of the city's garment district would have as its focal point a 40-story tower soaring above a landscaped plaza.

A proposal that outside walls of the tower be serrated, each of which would consist of a narrow glass panel and longer surface set at an angle to the clear glass was made by A. Gordon Lorimer, chief architect of the center.

His plan would reduce "fantastic loads" on air conditioning equipment, Lorimer said, and eliminate "almost intolerable conditions" for persons working near windows.

The longer surface of the serration in the walls would be of translucent glass blocks with built-in heat and glare-reducing filters, Lorimer added.

Other buildings are also planned for the fashion center, it was announced.

Wheelco Sets Up New Branch Office, Moves Four Others

ROCKFORD, Ill. — H. H. Kieckhefer, sales manager of the Wheelco Instruments Div. of Barber-Colman Co., announces that a Wheelco branch office has been established at 522 E. Jefferson St., Springfield, Ill., with LeRoy Peterson as sales manager of the new outlet.

In Indianapolis, the Wheelco branch office has moved to 1953 Central Ave.; the Wheelco branch office address at Buffalo has been changed to 2534 Elmwood Ave.; the Rock Island (Ill.) branch office is now located at 3710 - 14th Ave.; and at St. Louis, the Wheelco branch office address has been changed to 2344 Hampton Ave., it was added.

New Hotel Has Atmospheric Freshness

200 Tons of Refrigeration Air Conditions 200 Guest Rooms, 200 More Cools 20 Separate Zones

RENO, Nev.—Reno's newest luxury hotel has "built-in atmospheric freshness" in every cubic inch of its space.

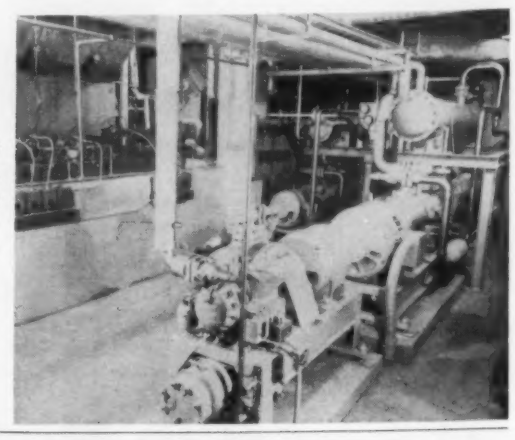
The Holiday hotel is air conditioned by 400 tons of refrigeration, half for the 200 guest rooms, the other half for the remainder of the glittering new "caravansery." Carrier air conditioning equipment is used throughout, installed by the Air Conditioning Co., Inc. of Glendale, Calif.

Each guest room has its own glassed-in patio with access by a sliding glass door.

"The Carrier air conditioner is so situated that a part of conditioned air is blown directly over this glassed-in area to avert any possibility of a draft," it was pointed out. "Each room may be automatically adjusted to the occupant's desire as to temperature and air flow."

The public areas of the hotel are also air conditioned by the use of Carrier "Zone Weathermaker" units utilizing filtered outside air. Air Conditioning Co. has divided the public space of Holiday House into 20 "zones," each with its special atmospheric requirements, each automatically maintained to its thermostat setting.

EVERY Holiday hotel room has individual air conditioning control.



BATTERY of Carrier compressors for modern Holiday hotel installation.

KITCHEN, LOCKER ROOMS, STORE ROOMS COOLED

Departing from standard practice, the hotel has also provided the kitchen area, employes' locker rooms, and basement store rooms with filtered, tempered air.

The kitchen walk-in boxes are equipped with Carrier refrigeration. Kitchen reach-in boxes are each provided with an individual remote condensing unit to insure continuous operation.

"A special luxury feature, made practical by Air Conditioning Co. engineers, is a remote-type automatic temperature-indicating unit, installed in the chef's office," it was noted. "He can tell at a glance whether any undesirable temperature change has taken place in any of the nine refrigeration boxes."

NORTH, SOUTH SIDES EACH HAVE 100-TON UNIT

Each 100-ton unit of the room air conditioning system is a separate "zone," one on the north side of the hotel, one on the south. If weather conditions warranted it one zone could be engaged in cooling; the other in heating.

The entire heating, ventilating, and air conditioning installation comprises three different floor levels, in addition to the chief engineer's office level, so placed that he can maintain constant vigilance over operating conditions.

Visitors to the mechanical rooms have commented, "This must have been copied from a U. S. Navy design" or "It's just like on a Navy Ship."

Air Conditioning Co., in addition to Holiday hotel, have air conditioned many of the largest and most important stores, office buildings, and public structures in the west, it was pointed out.

Crane To Move Chicago Sales Branch to Suburb

CHICAGO—After 92 years of doing business in the building at 156 N. Jefferson St., Crane Co. is packing up its valves fittings, bathtubs, and boilers and is moving its sales branch to the suburbs.

It is opening a new Chicago area branch at 9234 W. Belmont, Franklin Park. The new building is headquarters for Crane Co. sales, warehousing, regional billing and credit offices as well as the central district sales office.

Crane's general office remains at 836 S. Michigan.

The new Franklin Park building, erected at a cost of $1,800,000 by Country Life Insurance Co., is being leased by Crane Co. It provides 36,000 sq. ft. of air conditioned office and display space and 117,000 sq. ft. of warehouse space. In addition, a pipe warehouse, measuring 70 by 450 ft. with a capacity of 3,500 tons of pipe is attached to the warehouse.

The building was planned to harmonize with surrounding ones.

For more information about products advertised on this page use Information Center, page 66.

TWO 8-ton Typhoon air-cooled condenser units with two Typhoon H-86 "SC" units condition this television network engineers' room with its complex electronic equipment which gives off vast amounts of heat.

Two 8-Ton Air-Cooled Units Condition TV Engineering Room on 85th Floor

BROOKLYN — High atop Manhattan's skyline, engineers for the American Broadcasting Co.'s television network, surrounded by complex electronic equipment pouring out vast amounts of heat, transmit their magic pictures in cool comfort.

Here on the 85th floor of the Empire State building is "one of the highest air conditioning installations in the world."

ALMOST IMPOSSIBLE TO USE CONDENSER WATER

Naturally, it was noted, use of condenser water at this level was not only impractical but virtually impossible. So, engineers of Five Towns Refrigeration Co., Inc., East Rockaway, N. Y., chose air-cooled units.

Five Towns President Leonard Morris and Chief Engineer Al Chaitin joined with ABC executives Harvey H. Mellion and John G. Preston to design a compact installation, tailor-made to meet the peculiar needs of a sky-high television transmitter room. Their choice: two 8-ton Typhoon air-cooled condenser units, with two Typhoon H-86 "SC" units.

Removed in time, location, purpose, and design from the Empire State building are ABC's accounting offices at 70th and Broadway. These offices are in a warehouse-like structure hard by Sherman Square—a sprawling five-story building that had once been a garage and, before that, had housed on one floor Texas Guinan's fabulous speakeasy. For the job of cooling this former scene of "hot times," Five Towns once again chose packaged Typhoon air conditioning equipment.

"In view of the age of the building and the fact that we had to contend with different floor levels," said Five Towns Engineer Chaitin, "I think we can be especially proud of this."

EIGHT 8-TON UNITS COOL 5-STORY BLDG.

This particular problem was solved with 64 tons of packaged Typhoon equipment—eight 8-ton units (six H-96 SC and two H-86 SC models).

Originally this building was two separate units, but ABC's growth made it necessary to remove the walls between the two structures—which created the different floor level problem. Ductwork was installed in accordance with the requirements of the various floors, and in some instances it was connected to existing ventilating ductwork.

ASHAE, Architects Establish Joint Cooperation Committee

To Compile Data on Cost, Benefits of Commercial, Industrial Cooling Develop Area Standards; Study Conditioning Large Glass Area Bldgs.

NEW YORK CITY — The American Society of Heating & Air-Conditioning Engineers and the American Institute of Architects have appointed a joint committee to encourage greater cooperation between consulting engineers, architects, and the air conditioning industry.

John E. Haines, past president of ASHAE from Minneapolis, and Paul Schell, AIA member from Pittsburgh, were appointed co-chairmen at a recent organizational meeting.

Additional ASHAE committee representatives are Cary B. Gamble, New Orleans; Hermann C. Hoffmann, Syracuse, N. Y.; Society 1st Vice President Peter B. Gordon, New York City; and John Everetts, Jr., Philadelphia.

AIA members include James B. Newman, New York City; George S. Idell, Philadelphia; and Angelo R. Clas, Washington, D. C.

At the meeting committee members were assigned subjects for study and development to provide information of mutual interest.

Haines and Hoffmann of ASHAE are to compile data on the cost for and benefits from air conditioning commercial and industrial new buildings.

Standards for air conditioning buildings, as determined by geographical area, type of building, use, and occupancy, are to be developed by Gamble, Gordon, and Everetts of ASHAE. This information is to include facts about temperature, humidity, cleanliness, air movement, and noise levels. Cautionary details also will be given on the effect of light loads, window areas, and insulation on the cost and effectiveness of air conditioning.

The additional costs for the installation and operation of an air conditioning system in buildings with large glass areas will be investigated by Hoffmann of ASHAE and Schell of AIA. They will use typical building sections as examples.

Haines of ASHAE is to prepare a talk covering such subjects as types of air conditioning, costs, purposes, effectiveness, and reaction on the efficiency of occupants.

Road, Home or Business

Veteran Calif. Dealer Gears Organization For Truck Cooling, Auto Conditioning

ANAHEIM, Calif.—Merle Soden has moved his Soden Refrigeration Specialties Co. from 1002 N. Los Angeles St. to his new plant located on a frontage road of the Santa Ana freeway, U. S. 99 here.

Installation and servicing of automotive air conditioning and truck refrigeration is a growing part of Soden's business.

He has moved to make it convenient for auto and truck to find him, and will maintain stop-off service for both.

Soden installs units bearing his own emblem. With truck refrigeration installations he uses Frigidaire components. Sometimes blower units are used.

For automotive air conditioning under the Soden emblem he uses a Tecumseh compressor, with magnetic clutch.

To make it easy to handle equipment when making truck installations or repairs, Soden has a hydraulic loading dock at his new plant. Curbing installed is convenient for drivers who stop for truck service.

One man does auto air conditioning and truck refrigeration as a specialty, and also specializes in regulators and controls.

Soden has been established in Anaheim since 1938. His principal business is industrial refrigeration and air conditioning. He has his own sheet metal shop, and his own stock department.

He is Orange county retail distributor of air conditioning for Frigidaire and carries the complete Frigidaire line, including Frigidaire furnaces with adaptable cooling unit.

Because a member of his family is affected by air-borne allergies, Soden built his own home in 1950 as a sealed structure with complete air conditioning, using electrostatic Microtron plastic filters, insulating the attic with rock wool, and using single pane sealed windows 3/16 in. thick. He has a standard Frigidaire electric unit for standby, and dual evaporator circuits.

Bryant Dealers Hold Atlanta Sales Meeting

ATLANTA—Bryant air conditioning and heating dealers from Georgia and South Carolina were in Atlanta recently for a sales meeting. Host for the meeting was Bryant-Atlanta Corp.

Coupled with the meeting was an air conditioning technical training school conducted by the company's specialist, Charles Eskew.

Prefabricated Service Cores *(For Homes)*

Design Authority Sees Ducts, Conduit, Plumbing In Trough Around House; Cores for Kitchen and Power

CHICAGO—The house of the future, 10 to 15 years hence, will be built around a new concept — prefabricated service "cores."

Jay Doblin, director of the Institute of Design at Illinois Institute of Technology here presents his ideas on the house of 1966 to 1971 in an article in an issue of *Popular Mechanics* magazine.

Featured in the article is a house Doblin designed to illustrate the use of such mechanical, or service core units.

"These cores are the mechanical centers around which every house is built," Doblin said.

He pointed out that every house has the equivalent of a food or kitchen core, power core, bath core, entertainment core, and communications core.

Done Hard Way Now

At present most of these mechanical parts are laboriously and expensively assembled at the home site, according to Doblin.

"These cores should, and will, be available as complete units which can be installed easily at reasonable cost," he said.

In Doblin's house all ducts, conduit, plumbing, and the like would be placed in a trough around the house's perimeter. The cores which carry all mechanical equipment would be plugged into the trough making an extremely simple mechanical setup.

How Cores Fit In

Taking a close look at the mechanical cores themselves, the bath core would be put in place with only one electrical and one water connection. It devotes a small area to a sink, water closet, and storage.

The most luxurious section in the bath unit is the bathing and health center which has a reclining chair instead of a bath tub or vacant shower space. This section can be filled with water for a bath or used as a sit-down shower. In the ceiling are health lamps and oil sprays.

The Kitchen Center

Design of the kitchen or food core is based on Doblin's belief that present kitchen appliances are designed for an obsolete method of food preparation. He feels that pre-processed foods are gaining such acceptance that "soon there will be little else on the market."

Doblin's food core plan takes advantage of the fact that when a housewife uses pre-processed foods the need for mixing, peeling, and blending is eliminated.

Doblin would contain all food, housewares, and appliances in the food core. The housewife could do all her work in a narrow band 18 in. deep and from 25 to 66 in. high.

Maximizing efficiency, the proposal provides for delivery men to load storage spaces and for maintenance men to repair power equipment from outside the house.

'Atmosphere' Core

As planned by Doblin, the power core would require only water supply and electricity to keep the house in whatever atmosphere is desired by its occupants. It would contain a heat pump, ventilating equipment, and air purifier, and odor and germicidal control components.

The other mechanical cores in the house, for entertainment and communications, would integrate equipment for a variety of family activities. The entertainment center would afford facilities for home movies, television, radio, recorded music, and color slides.

Where more privacy is desired, the soundproof communications center would serve as a combination office-at-home and library. Here, all mail, business or personal records, communications equipment, and perhaps even a library stored on film, could be kept.

Doblin, a former executive designer with Raymond Loewy Associates, assumed leadership of the internationally known Institute of Design in 1955. He has served as chairman of the industrial design division of Brooklyn's Pratt institute.

Defers Dividend

CHICAGO — The board of directors of Admiral Corp. recently deferred action on a dividend until the meeting usually held in the second quarter. The company paid $1 per share in 1956.

For more information about products advertised on this page use Information Center, page 66.

In the Spotlight at ASHAE Exposition

—KEY NO. G-3313—

"KOOLER-AIRE" SERIES 83, 3-ton air-cooled condensing unit by UsAirco, features double coil assembly and blower. L. P. Hanson (l.), vice president, discusses unit with T. J. Waddell, the company's St. Louis representative.

—KEY NO. G-3315—

WITH OIL-FIRED furnace of the horizontal type, Thermo-Products, Inc. displayed a summer air conditioning coil section of special construction, designed to go with such a unit.

—KEY NO. G-3318—

COOL PACKAGE—Mueller "Climatrol" type 915, air-cooled air conditioner and model Pat Lee. The unit features two 1¾-hp. compressors for two-stage cooling with increased humidity control. Unit is pre-wired, pre-charged.

—KEY NO. G-3314—

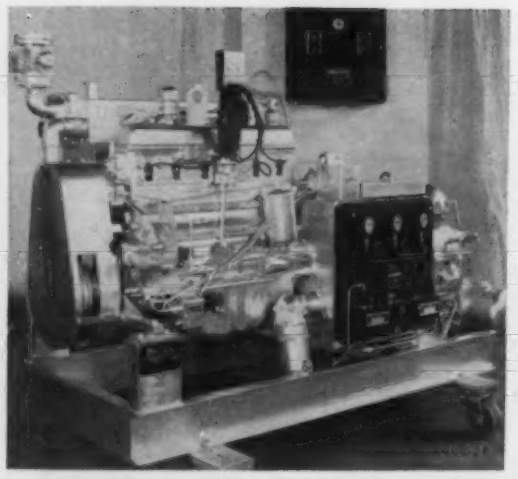
WATERBURY "COMFORT-ROL" constant comfort system of the Waterman-Waterbury Co., is shown with E. M. Delaney (l.), field sales manager, and Fritz Legler (r.), vice president, demonstrating.

—KEY NO. G-3316—

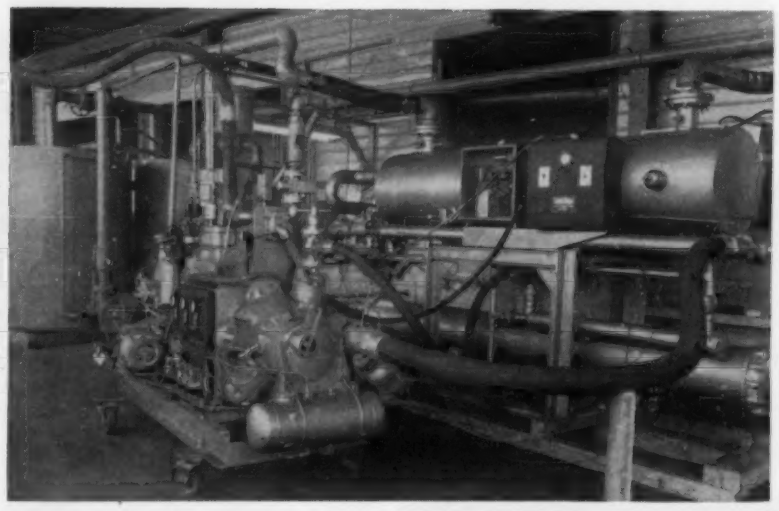
EXPLODED MODEL of light fixture combined with low velocity air diffuser by Pyle National Co., shares spotlight with Ingeborg Jorgensen.

—KEY NO. G-3317—

"ROLL-KLEEN" AUTOMATIC-CHANGING filter features new type medium with specially designed backing. Paul H. Johnson (l.), sales representative, and G. R. Holtz, sales manager of the Farr Co., discuss their product.



LEFT: The Ready-Power natural gas engine driven compressor unit is a 6-cylinder International Harvester work engine, direct driving a radial refrigeration compressor. Units are equipped with completely integrated capacity control systems, a.c. electric "thermostat" start systems, and complete instrumentation. They come in a range of 20 to 80 tons capacity.



ENGINE-COMPRESSOR units are connected by flexible refrigerant hose to chiller-condenser units. Before being shipped out, they are job tested in the manner described. Water temperature in the 500-gal. "load tank" (left) is then varied in increments of .2 of a degree from 55 to 45° F. for 20 to 76 hours while the complete system is job tested, and the refrigerant cycle properly balanced. The 500-gal. tank to the right of the load tank regulates water temperature into the condenser systems. The multitude of small wires and tubing lines in the picture are thermocouples and pressure lines leading from test points to test instruments and recorders.

Big Load Off Contractor's Shoulders

Ready-Power Testing Prepares Package Units For Full Load Right After Installation

DETROIT—Every gas-engine driven packaged air conditioner now being shipped from the Refrigeration and Air Conditioning Products Div. of the Ready-Power Co. here is set up to go into full load operation immediately after installation.

This has been made possible, states Norb Hall, manager of the division, through the completion at the company's plant here of quality control production test facilities which permit the test engineers to duplicate on the production line every field load condition which each individual unit may encounter in the field.

Among the things that this means to the contractor installing such equipment in the field is:

No field evacuating or dehydrating is required. All units are shipped only after this has been done at the factory and a refrigerant holding charge installed.

No "load run" is required on the job site. Each individual unit has been subjected to varying load conditions from minimum load to maximum.

No necessity on the part of the contractor to worry about whether "everything is ready to run." The unit has already been run for 20 to 70 hours on an actual cooling load and its operation checked carefully by several test engineers equipped with the finest instruments available.

TEST FACILITIES LISTED

Present facilities for testing now include:

Complete chilled-water air conditioning test block including a 500-gal. controlled temperature "load bank," a 500-gal. "tower tank," complete Fischer-Porter flow meter apparatus for checking water and refrigerant flow rates.

Complete Pyrometer—thermocouple temperature testing and control equipment.

Complete laboratory type pressure and temperature instrumentation.

Complete electrical instrumentation including Esterline-Angus recording instruments to simultaneously record watts, volts, power factor, amperage.

Engine exhaust gas analyzers, electric tachometers, Strobelite tachometers, and other engine test equipment.

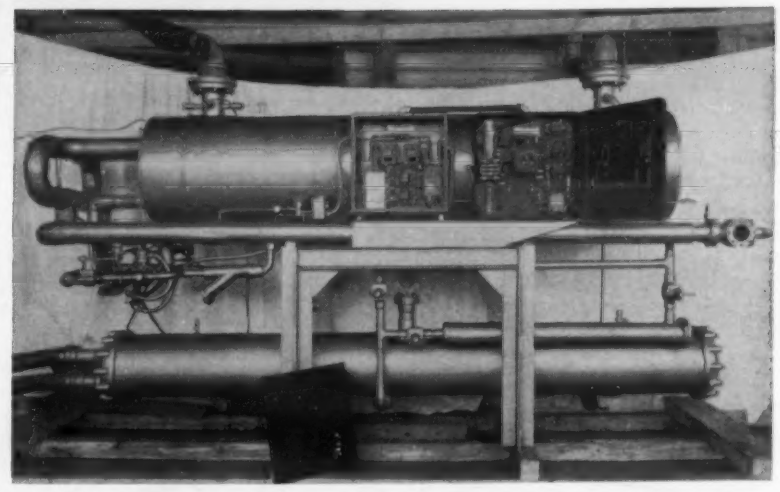
Complete controlled temperature and humidity "load room" and "outdoor ambient" rooms for testing packaged direct expansion air handling units with air-cooled condensers.

Production units of this type used for Military Missile projects must hold exact temperature and humidity and pressure conditions in the "load room" while the entire condensing assembly is being subjected to various "outdoor ambient" temperatures, across the air-cooled condenser, or 40 to 140° F.

When the Natural gas-engine-driven package unit arrives at the new production test line it is processed first through a "gas cycle" test where all pressure type switches are set, the variable speed capacity control system adjusted for minimum and maximum load, and the natural gas carburetion adjusted. Spark plugs are gapped for .018 to .020 in. and magnetos are timed approximately, during a preliminary four-hour test period.

FINAL TEST ROOM

Units then proceed to the final test room where they are connected to water pumps, fuel lines, electrical power and engine exhaust piping. The unit is then completely instrumented with gauges, thermocouples, water flow rate meters, superheat pyrometers, and visual aids such as pyrex glass suction port line. Tachometer, vacuum gauges, exhaust gas analyzer, and engine water flow meter are attached to the engine.



THE MATCHING-CHILLER condenser package shown here is of the kind that forms, with the engine-compressor unit, a complete matching and integrated refrigeration system supplying chilled water for any type of application.

Two 500-gal. water tanks supply water to chiller, condenser, and engine heat exchanger at the desired quantity and temperature.

For the next 20 to 70 hours the machine is operated under all load conditions by varying the temperature of the "chilled water" load bank and "tower water" tanks.

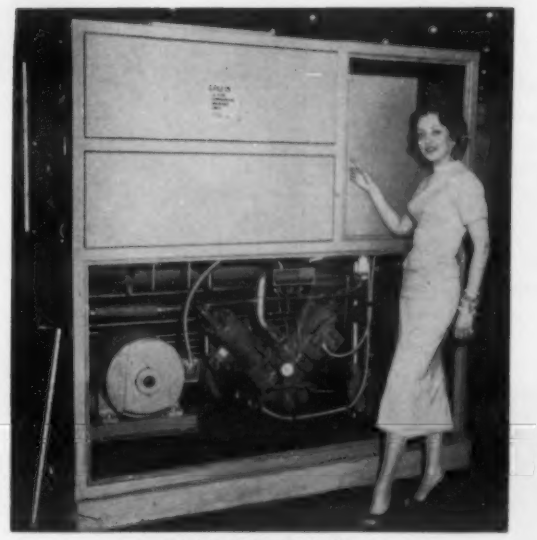
Superheat of all expansion valves are checked at several load conditions by reference to thermocouple readings and visual inspection of the refrigerant gas as it flows through the glass section of suction line, all liquid line solenoids are sequenced properly by adjustment of the multistage water thermostats. The "Loadmatch" capacity control system is adjusted so that the pumping rate (speed) of the compressor exactly matches the heat load impressed on the machine by the load bank apparatus.

After a unit has operated for between 20 and 70 hours through all conditions of load it is carefully inspected for leaks a third time and prepared for shipment. Preparation includes leak checking, evacuating, dehydrating installation of a refrigerant holding charge, and a complete inspection of over 40 items.

For more information about products advertised on this page use Information Center, page 66.

—KEY NO. G-3357—
"ROTOLOCK" VALVES, permitting line connections from any angle, are added to the Tecumseh line of compressors. Dick Signorelli (l.), of Mueller Climatrol, and H. Baragman, Tecumseh sales representative, inspect new valve on 5-hp. compressor.

———KEY NO. G-3360———
UNIT FOR DUAL-DUCT air conditioning is the Type V3 model for under-window or wall mounting. They discharge vertically, upward, through Buensod-Stacey high velocity outlets designed for quiet and draftless diffusion of conditioned air. Each unit has a compressed air operated mixing valve and volume controller.



———KEY NO. G-3363———
ADDITION to the Dunham-Bush line are packaged commercial air conditioners, in a range of sizes from 10 to 40 tons, all equipped with evaporative condensers. Margie Noxon poses with a 15-ton model.

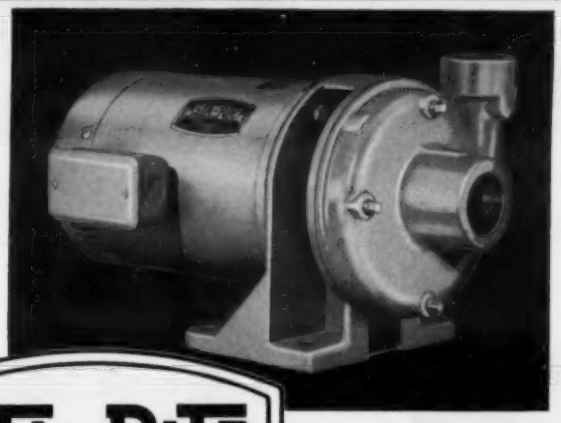
—KEY NO. G-3358—
5-TON "GENATRON" heat pump, model 525-A, is a new product of General Air Conditioning Corp. Carl Spitulin (r.), of U. S. Post Office, looks on as J. L. Paulus, sales manager, points out new features.

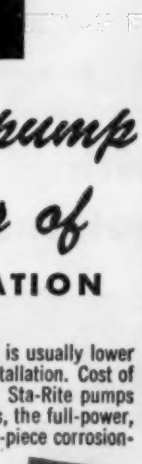
Additional details on new products shown at the recent heating and air conditioning show in Chicago can be obtained by using the "Information Center" blank on page 66 of this issue. Please refer to item by Key Number, which is with each picture. Other photo coverage of the show appears throughout this issue and in the March 11 issue.

———KEY NO. G-3364———
BIG PACKAGE CHILLER, part of the line which Vilter Mfg. Co. is making available, is this 75-ton model, new in the line. Visitors to display space demonstrate the highly concentrated interest which most show visitors gave to exhibits.

—KEY NO. G-3359—
FACTORY CHARGED condensing unit, 2, 3, and 5 tons, with aluminized steel cabinets, the newest product of Armstrong Furnace Co., is the subject of discussion between Jack Swinehart (l.), Armstrong's sales promotion manager, and T. J. Echternacht, district manager.

———KEY NO. G-3361———
WORTHINGTON'S NEW low-line induction circulator with range of 150 to 720 c.f.m., total air, is tested by model Diana Gale.





———KEY NO. G-3362———
MANUAL SWITCHOVER from heating to cooling is featured in special room air conditioner installed in Warnall Plaza Apartments, Kansas City, explains Ben M. McDougall, sales manager of Kennard Corp.

—KEY NO. G-3319—

NEW HORIZONTAL self-contained packaged air conditioner, featuring access panels and choice of indoor or through-the-wall installation, is product of International Heating Co. Model Ingeborg Jorgensen is the interested party.

—KEY NO. G-3322—

"HISS-AND-TELL" refrigerant line driers were shown by Henry Valve Co. With these "Abso-Dry" pressure sealed driers, it is possible by loosening the cap (as R. S. Dickert does here in a demonstration which Cy Otterholm watches) to find out through the hissing sound if the drier is working effectively.

———KEY NO. G-3323———

GOING UP in size are air-cooled condensers, as is demonstrated by the 45-ton "Krack" model that serves as a giant back-drop for a conference between F. A. Klaas (l.), vice president, Refrigeration Appliances, Inc., and Boyd Evans of United Refrigeration Supply, Memphis.

—KEY NO. G-3320—

"JET SIPHON" is the word for Clarage Fans' new exhauster, said to be designed for higher static ranges than normal roof ventilators. H. A. Melzer (l.), manager of industrial sales, and Frank Otten (c.), production manager, tell C. L. Arnold, of Kalamazoo, all about it.

—KEY NO. G-3321—

GIANT-SIZE ceiling type air diffuser, capable of handling air distribution problems in the largest of public assembly rooms, was among the broad line of air diffusers, grilles, and registers exhibited by Titus Mfg. Corp.

———KEY NO. G-3324———

TWO NEW VALVES for refrigeration and air conditioning applications were spotlighted in the Sporlan Valve Co. booth. At right, H. F. Spoehrer points to the new Type XEK valve, while M. D. McAnany holds the new type 20 solenoid valve.

———KEY NO. G-3325———

FLAT BOTTOMED liquid receiver is new Standard Refrigeration Co. item to which Dwight Orr directs attention. It is designed so that it will sit rigid on a base, without use of mounting brackets.

———KEY NO. G-3326———

ENCLOSED-FIN HEATING COIL for baseboard application, which eliminates noise, is discussed by Melvin Dubin (l.), president, and Alvin Buschel (r.), sales manager of Slant-Fin Radiator Corp.

Looking for a Business to Buy . . . ?

Check the Business Opportunities Section in the classified advertising columns.

For more information about products advertised on this page use Information Center, page 66.

What Was New

At the ASHAE Show

A bit of the Heating and Air Conditioning Exposition is being brought right to your doorstep, so to speak, with this NEWS photographic coverage of new products shown in Chicago. If you wish additional details on any of these items, please request it on the "Information Center" blank on page 66. Products should be identified by Key Number which appears with each picture. More pictures will be found on other pages of this issue and in the March 11 issue.

——KEY NO. G-330——

"STRIPLINE" SLOT-TYPE DIFFUSER made of cold rolled steel is new product of Air Devices, Inc. Model Ingeborg Jorgensen holds a section of the firm's 6-row type H-20.

——KEY NO. G-334——

NEW SERIES 77 SUPER-EXTENDED BASEBOARD DIFFUSER, is demonstrated by H. F. Robinson (l.), district manager of Lima Register Co. J. L. Irvin, sales assistant, looks on.

——KEY NO. G-335——

75-TON PACKAGE LIQUID chiller, completely charged, sealed, and ready to operate, is shown by M. H. Hofmeister of Bell & Gossett Co., to Mr. and Mrs. Louis Blazek, of Rochester, Minn.

——KEY NO. G-336——

GLASFLOSS, NEW CUT-IT-YOURSELF filter material produced by the Pittsburgh Plate Glass Co., is displayed by lovelies, Jane Tamburino (l), and Camilla Hawk.

——KEY NO. G-331——

PORTABLE CHARGING STATION FOR "FREON-12" and "FREON-22," offered by Airserco Mfg. Co., features a high-vacuum pump. E. C. Williams, the company's president demonstrates.

——KEY NO. G-332——

MRS. N. A. BURKEY (l.), general manager of Chemical Solvent Co., Birmingham, Ala., "talks up" her company's ice machine cleaner to E. J. Clark (r.), sales engineer, Joy Mfg. Co.

——KEY NO. G-333——

HAND ADJUSTABLE WATER REGULATING valve with monel seat is demonstrated by Robert E. Ely, sales representative for the Marsh Heating Equipment Co.

On Stage at Chicago Heating, Air Conditioning Show

——KEY NO. G-3327——

HIGH VELOCITY air distribution system, making use of the Anemostat high velocity sound attenuation chamber to mix and diffuse the air which is received through small, circular ducts, was an operating display which drew the attention of this visitor.

——KEY NO. G-3328——

AIR-COOLED CHILLER, a 2-ton package unit designed for residential air conditioning applications, was new item shown by Heat-X, Inc. Looking it over are R. Schultz of Yocum & Goode, New York City, and Cecil Boling, president of Dunham-Bush, Inc., of which Heat-X is a subsidiary.

——KEY NO. G-3331——

"DOUBLE KOOL" packaged air conditioner that is claimed to produce eight to 11 tons of cooling from a 5-hp. compressor is displayed by Hastings Air Control Co., Inc. Holly Ray does the honors.

——KEY NO. G-3329——

MODELS NOTE that heated and cooled air are delivered simultaneously by the Multi-Zone Climate Changer shown by .The Trane Co.

——KEY NO. G-3330——

RESIDENTIAL air conditioners in a variety of types and style were exhibited by the Lonergan Mfg. Div. of McGraw-Edison Co.

For more information about products advertised on this page use Information Center, page 66.

8 Trane Scholarships To Train Technicians As Engineer's Aides

LA CROSSE, Wis.—To help alleviate the critical engineering shortage, Trane Co. here has established eight two-year pre-engineering scholarships at $500 each in cooperation with La Crosse State college, the company has announced.

Beginning with the fall term, the eight awards will be made yearly. Senior boys in eight nearby Wisconsin and Minnesota counties are eligible, the firm explained.

Purpose of the program is to interest young men to train as engineering technicians by completing a strong, two-year curriculum, stressing mathematics and science.

After the two-year period, the scholarship recipients will join Trane, it was stated, "relieving graduate engineers of many time-consuming responsibilities."

"As a result," said Thomas Hancock, Trane executive vice president, "there will be better use of the skills of present engineers. It is a question of getting the most good out of what is available. Graduate engineers could concentrate on higher problems while the new group would take over those duties not requiring specialized skills of fully trained men."

As an added incentive, Trane plans to arrange summer employment in its engineering department while the students are participating in the program. After completion of the two-year course, the students will be able to join the firm as engineering technicians, it was pointed out.

Should they decide on continuing their schooling to seek engineering degrees, they will "be free to do so" and will receive credits toward a degree.

Eligibility is limited to the top quarter of senior boys in the participating high schools. Two years of high school mathematics and one of science are preferred for those interested. In all cases, scholarship winners "must be in need of financial aid," Trane said.

Powers Moves To Cooled Dallas District Office

DALLAS—Powers Regulator Co., manufacturer of temperature and humidity controls, has moved its Dallas district operations into a new 3,500-sq. ft. office and warehouse building in Brook Hollow Industrial District, it was announced by R. G. Lyford, Dallas manager.

The office area of the new building at 7707 Sovereign Row in Brook Hollow is air conditioned. Williams & Wagner Construction Co. built the structure, which will be occupied by the Powers company under lease.

DeSoto Beach Hotel Will Get Cooling

SAVANNAH, Ga.—The J. B. Pound Hotel Co. has sold the DeSoto Beach hotel to the General Oglethorpe hotel, of which Irwin Knohl is president. Knohl said extensive improvements are planned for the beach hostelry, including complete air conditioning of all facilities.

York Shows 8 Air Conditioning Units, Two Featuring Built-In Bookshelves

CHICAGO — Eight new air conditioning units were introduced by the Industrial Div., York Corp., subsidiary of Borg-Warner Corp., at the International Heating and Air Conditioning Exposition in the International Amphitheatre here.

The display featured such design and engineering innovations as modular units with built-in bookshelves, foot-high modular units, and a high-velocity air conditioner containing a high-capacity patented double coil, according to York.

4 HIGH-VELOCITY UNITS

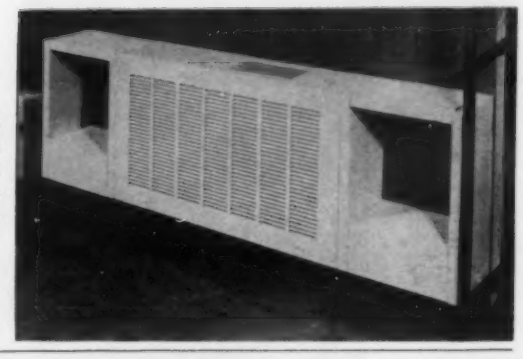
Four of the new models are high-velocity units and four are fan-coil type. Three of the high-velocity units are wall mounted and two of these embody modular construction with functional enclosures featuring bookshelves on either side and concealed service enclosures. One new model is the "foot-high" air conditioner said to be especially adaptable for use in offices or rooms with floor-to-ceiling glass walls.

MORE SECONDARY COIL CAPACITY

York's patented double coil is claimed to gain its efficiency as a result of a greater secondary coil capacity for a given volume of primary air. This unit is adaptable to installations where balanced cooling has been made difficult by the sun's heat on one side of a building.

A feature of the four new fan coil units is the interchangeability of parts in floor, wall, or ceiling mounted units as well as right and left hand units, the company pointed out. Both floor and wall types lend themselves to modular construction with bookshelves at either side.

York also showed its recently-introduced high-speed, lightweight compressor, the "Turbomatic," which engineers say is particularly well-suited for installation on upper floors or in roof penthouses where floor loads are an important factor.



NEW high-velocity "Yorkaire" conditioner features high capacity patented double coil. Note modular design with built-in bookshelves.

Controls Co. Expands Holland Operation

SCHILLER PARK, Ill.—Controls Co. of America has announced an expansion program to increase assembly and fabrication operations at the Nijmegen, Holland plant of its subsidiary Controls Maatschappij Europa N.V.

The expansion will increase Nijmegen production of vaporizing oil burner controls, refrigeration and expansion valves.

—KEY NO. G-337—

VERSATILE 3-TON EVAPORATOR UNIT by Eureka Williams Corp., can be suspended overhead. V. Krouse, manager, field service, points out interchangeable panels to H. E. Glunt, of Hamilton, Ont., Can.

—KEY NO. G-338—

NATURAL GAS DRIVEN COMPRESSOR UNIT powered by 6-cylinder engine, is shown by Ready Power Co. M. K. Hall, manager of refrigeration division of the company, answers questions of Earl F. Schreiner, assistant manager, Gulf Cities Gas Corp., St. Petersburg, Fla.

—KEY NO. G-3311—

WORKABLE into almost any shape or form desired for ductwork or any type of connections for distribution systems, is the round metal flexible tubing offered by Flexible Tubing Corp., and charmingly demonstrated here by Robbi Palmer of Cleveland.

—KEY NO. G-339—

NEW CONDENSING UNIT and compressors for the air conditioning and refrigeration market were shown by Bendix-Westinghouse. On the floor is a compact ½-hp. condensing unit, and on the display table is model of the new 3-hp. and 5-hp. hermetic compressor which has been in development at the firm's Evansville, Ind. plant.

—KEY NO. G-3312—

TRI-PAK AIR CONDITIONER-HEATER combination, featured by Deering Air Conditioning Co., maintains 15 gals. of useable hot water in storage tank. John Ruff (l.), Standard Air Conditioning Co., Chicago, gets the particulars from James W. Riley, Deering president.

—KEY NO. G-3310—

COMPRESSOR MOUNTED UP OFF FLOOR TO ELIMINATE WATER DAMAGE, is featured in new home unit by Shana Mfg. Co. Mart Simon (l.), sales manager of Enterprise Heating & Power Co., and Harold J. Gainer, Shana sales representative, listen while Harry G. Shaffer (r.), president of the company, talks it up.

For more information about products advertised on this page use Information Center, page 66.

New Brunner Models Feature Light Weight, Compactness, Easy Servicing

CHICAGO — Two semi-sealed motor compressors for fixture manufacturers and the air conditioning-refrigeration industry were among new products shown by Brunner Mfg. Co. and the Brunner Co. at the 13th International Heating & Air Conditioning Exposition.

According to Wallace J. Hoeing, general sales manager, the new 5 and 7½-hp. "Brunner-metic" machines are designed to provide more compact and lighter weight models for air conditioning and refrigeration applications. Also, the easy accessibility of control panels gives designers of refrigeration and air conditioning equipment "unusual flexibility and freedom," Hoeing pointed out.

New 3-Hp. Semi-Hermetic

In addition, a new 3-hp. semi-hermetic model is offered to operate on Refrigerant-12 for low temperature applications.

It was also announced that with the addition of 5 and 7½-hp. condensing units, Brunner extends its line of semi-hermetic refrigeration condensing units from ¼ through 7½ hp.

Both the 5 and 7½-hp. units are specially designed for residential and small commercial air conditioning installations. In addition, these units may be economically incorporated in the design of walk-in cases, reach-ins, and frozen food display cases, it was noted.

The 5-hp. units are four cylinder and may be cooled by air, water, or air-and-water. All models are available in Refrigerant-12 for high, commercial or low temperature applications. "These Brunner-metics are raised base and light weight with extremely compact over-all dimensions," it was stated.

Semi-sealed 7½-hp. condensing units with Refrigerant-12 are available for high and commercial temperature applications, and for low temperature application with Refrigerant-22. These six-cylinder units are water cooled.

Brunner also showed new and low cost 1½-hp. semi-sealed units.

Rack Designed Primarily For Food Stores

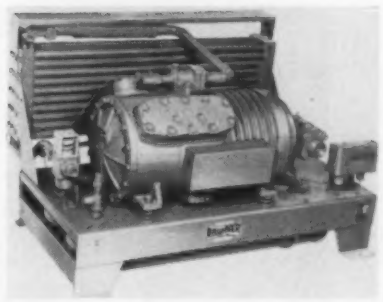
A new rack designed and manufactured by Brunner for the accommodation of Brunner equipment and for use primarily in food stores was shown, too. These new racks feature central control panels which contain all the necessary controls for each condensing unit.

Hoeing noted that the racks are furnished with controls mounted completely wired. Rack mounted units are also available without condensers for use in conjunction with evaporative condensers or remote air-cooled condensers or they can be provided with a water-cooled condenser for use with city water or cooling tower.

Fractional Hp., Semi-Sealed Condensing Units

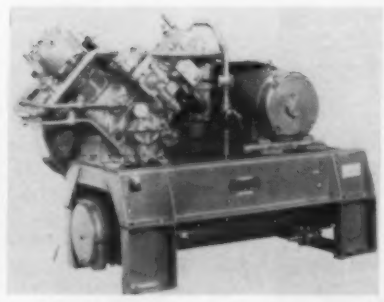
The Brunner exhibit also featured fractional horsepower semi-sealed condensing units with a newly-designed side or optional top control panel mounting which allows designers of bulk milk coolers and other refrigeration equipment "unusual flexibility and freedom in application."

Hoeing said that Brunner has anticipated the increased industrial and other use of 440-volt equipment by introducing semi-hermetic motor compressors in 1½, 2, and 3 hp. for 440-volt applications with a number of condensing units available using these compressors in flat or raised base design and cooled by air, water, or air-and-water.



BRUNNER 7½-hp. semi-hermetic condensing unit.

OUTDOOR condensing unit.



TWO-STAGE open-type compressor.

Also announced by Brunner at the exposition were two-stage open-type integral compressors "whose principal applications are below -30° F. but which may be used economically in other temperature ranges because of power savings." These compressors are available in 3, 5, 7½, 10, 15, 20, 25, 30, 50, 60, 75, and 100 hp.

Liquid Injection Available on Open Units

In addition, Brunner announced the availability of liquid injection on open-type units to remove speed restriction on capacity modulation devices.

Hoeing also revealed that Brunner is introducing 2 and 3-hp. exterior condensing units. These semi-sealed units are weather-proof, high capacity, and air cooled, he pointed out.

Models are available for ice bank type bulk milk coolers and commercial applications 0° F. to 25° F. evaporator temperature ranges; for direct expansion type bulk milk coolers and other applications 20° F. to 50° F. evaporator temperature ranges. Units especially designed for remote air conditioning applications are also available.

"These units operate efficiently with 120° ambient air across the condenser," it was stated. "All electrical leads are wired in conduit to junction box with access to exterior and, with access door opened, all electric components (control panel and compressor terminal box) are exposed for inspection.

"A low voltage control panel provides 30-amp. magnetic contactor, while a centrifugal blower moves air quietly and positively, regardless of wind direction. Efficient economical operation is assured with full 1,000 c.f.m. condenser air per ton.

"Single-phase units are equipped with inherent motor protection on the compressor and with two-pole, heavy-duty dual pressure control. Three-phase units are equipped with 20-amp. quick trip magnetic starters and with single-pole, dual pressure control. When too low discharge pressures are expected, a pressure control may be wired in the fan circuit to cut off the fan at a reduced discharge pressure.

"Oversized all non-ferrous condensers are constructed with tempered aluminum finning which resists fin damage. The air discharge grill provides protection from the blower wheel with a minimum restriction to air flow. Finished in a green hammertone, the unit blends with surrounding shrubs."

—KEY NO. G-3387—

MINIMUM height to fit limited spaces, is a feature of the all-new American Blower packaged air conditioner line. Also featured is the fact that air is drawn through the coils, and the claim is thus made that every square foot of coil is utilized.

For further information on products shown on this and other pages in this issue, use Key Numbers and the "Information Center" blank on page 66.

—KEY NO. G-3390—

CHANGE-OVER VALVE for air conditioning system, operating thermostatically and providing the switchover from cooling to heating or vice versa, was featured by Detroit Controls Corp. and gets the attention of Hugh Maynard of Waukegan, Ill.

—KEY NO. G-3391—

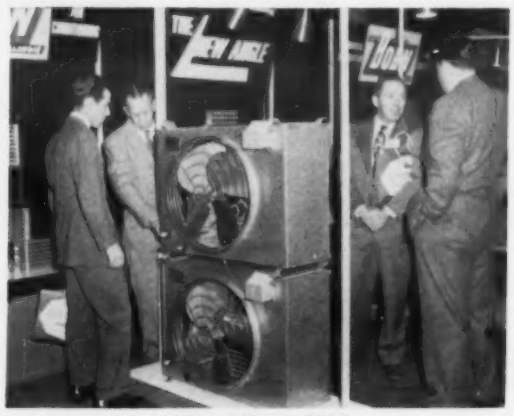
PIPE INSULATION, designed to stop condensation and promote system efficiency, was exhibited by Armstrong Cork Co. with its Armaflex line, adaptable to pipe in any form or shape.

—KEY NO. G-3388—

TWO CONDITIONERS in one, is the claim made for the Coleman Co.'s "Polar Pak" waterless residential cooling system. It uses two compressors for two-stage cooling, dependent on conditions. A four-position selector switch provides choice of various stages of cooling, or ventilation.

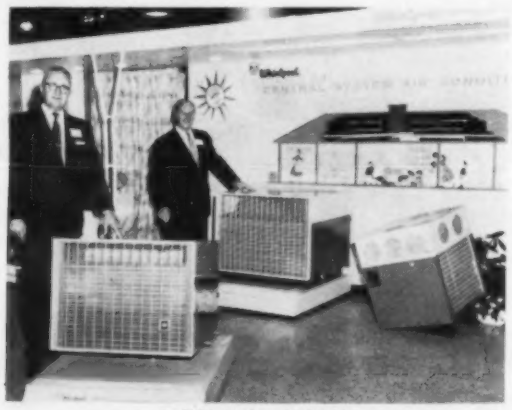
—KEY NO. G-3389—

FLEXIBLE TUBING for duct connections in air conditioning systems were featured in the display of the Wiremold Co.



—KEY NO. G-3392—

FEATURING A "SENSITIZER," which cuts down part of the condenser capacity to provide proper operating head pressure under all kinds of outside conditions, is this Betz Div. of Bohn Aluminum Corp. model 36-ACS-1 air-cooled condenser.



—KEY NO. G-3393—

COMPONENTS FOR ITS central system air conditioners were shown by Whirlpool-Seeger Corp. John Seippel and J. B. Ogden pose with the coil and condensing unit sections of the assembly.

John Peters Joins Saginaw Distributors

SAGINAW, Mich. — John Peters is now in the Commercial Div. at Saginaw Distributors, Inc., it was announced recently by W. R. Laut, division manager.

Formerly a partner in P & B Supply Co., of Alpena, Mich., and for some time associated with J. Geo. Fischer & Sons, of Saginaw, Peters will complete the commercial staff of Saginaw Distributors, handling the counter trade with the help of Larry Winters, the company further disclosed.

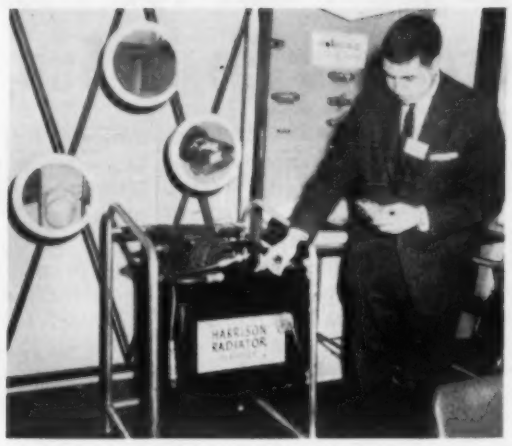
Saginaw Distributors is a York wholesale distributor, handling the full line of York air conditioning, refrigeration, and heating products, and is also a distributor for Marley cooling towers, Foster refrigeration equipment, Temprite and Electroair products, and related major equipment items. In addition, it is a wholesaler for Sporlan Valve, Anaconda Copper & Brass, Refrigerating Specialties, Imperial Brass, and other allied lines.

The appliance division of Saginaw Distributors is a franchised Philco-Bendix wholesaler for northeastern Michigan, it was noted.

—KEY NO. G-3394—
"VANEAXIAL" BLOWER, for which is claimed reduced noise and weight, and which offers one basic housing for various fan performance ratings, was shown by Electric Boat Div., General Dynamics Corp. W. M. Stratton discusses the product with Parke Thompson, III and Parke Thompson, consulting engineers from St. Louis.

—KEY NO. G-3395—
LATENT HEAT storage unit is Dole Refrigerating Co.'s "Ice-Cel" unit which provides a "stored up" cooling effect, and has application in the air conditioning of churches, funeral homes, tourist courts, and theaters.

—KEY NO. G-3396—
THIRTY-TON packaged air conditioner was a new model in the line shown by Airtemp Div., Chrysler Corp. Marilynn Griffith and Peggy Hammer pose with the unit to give some idea of the size in which packaged commercial air conditioning equipment is now being made available.



—KEY NO. G-3397—
SELF-SEALING couplings for use on refrigerant lines in various types refrigeration cycles for air conditioning applications, were exhibited by Aeroquip Corp. Particular application here is in a front-end automobile air conditioning assembly being made by Harrison Radiator Div., General Motors Corp.

Los Angeles Has Jobs As Sheet Metal Work Assistant Supervisors

LOS ANGELES—Job opportunities as assistant supervisors in sheet metal work with a recommended sales range of $516 to $641 a month have been announced by the City of Los Angeles.

Eight years' journeyman experience installing or maintaining air conditioning and sheet metal facilities, three years of which was as a working foreman, are required, it was pointed out.

Applications must be filed by mail or in person at Room 5, Los Angeles City Hall or at the information window in lobby, Van Nuys Branch City Hall, by 5 p.m., Thursday, April 5, it was added.

Johnson Joins F. C. Kramer As Chicago Sales Engineer

CHICAGO—Wesley H. Johnson, sales engineer formerly with Frigidaire Sales Co., is now associated with Fred C. Kramer Co. here, distributor and wholesaler of air conditioning, refrigeration, and heating equipment in the area.

Johnson will represent Kramer as a sales engineer in the Chicago metropolitan area, it was disclosed.

Harry G. Johnson, sales manager of Kramer, announced that the 1957 expansion program provides for the addition of one more sales engineer to the sales force within the next 60 days to cooperate with contractors in product planning. Several educational meetings are planned for service engineers and contractors within the next 90 days, he said.

Program Set for RSES Western Educational Forum To Be In San Francisco April 5-7

SAN FRANCISCO—Preparations are being completed for the regional educational forum on refrigeration and air conditioning to be held April 5-7 at the Sheraton Palace hotel here under sponsorship of the California Association, Refrigeration Service Engineers Society, and the International RSES.

TO GIVE TALKS

Industry leaders who will address the west coast forum include George S. Jones, Jr., managing director of the Air-Conditioning & Refrigeration Institute, and Irving J. Fajans, president of the Air Conditioning & Refrigeration Wholesalers.

The forum program results from cooperation of the International RSES and RSES chapters in the California, Arizona, Nevada region, the group explained.

The intensive three-day conference will bring together authorities in their respective fields who will present demonstrations and visual programs designed to provide industry members with the latest appliion data, service and installation procedures, and information on industry expansion.

VARIED PROGRAM ANNOUNCED

Program for the forum, fourth in a series conducted during the past year, lists a report on a survey of central residential air conditioning in the U. S. and talks on electric distribution problems, air problems in air conditioning systems, "What a Super Market Operator Expects of a Service Contractor," and automobile air conditioning.

Other presentations will cover servicing cooling towers and evaporative condensers, "Shootin' Service," oil burners and heaters, Refrigerant-22 and related problems, installation and servicing of remote condensers, and design and application of insulation in refrigeration and air conditioning.

'INFORMATION PLEASE' SESSION PLANNED

Also programmed are "Information Please" sessions each morning, a banquet and entertainment, an ARW movie on "How To Sell Quality," and a soldering contest sponsored by Mueller Brass Co.

Another forum feature will be a "gadget" contest. Cash awards of $50, $25, $15, and $10 will be made for service gadgets displayed. RSES members and nonmembers are invited to exhibit any tool or device they have made or designed. Anyone registered and attending the forum can enter a gadget for any serviceman who may not be in attendance.

Mrs. Eugene W. Larsen is chairman of entertainment for the ladies.

Following is the forum program, as announced by Charles G. Bell, president of the California Association of RSES, and Fredric L. Pound, president of the host Golden Gate chapter:

FRIDAY, APRIL 5

8 a.m.—Registration.

9 a.m.—"Information Please." Board of experts will give authoritative answers to refrigeration and air conditioning problems.

10:30 a.m.—"Report of a Survey of Central Residential Air Conditioning in the United States," Samuel N. Seeley, western district manager, "Kinetic" Chemicals Div., E. I. du Pont de Nemours & Co., Inc.

1:15 p.m.—Welcoming addresses by Charles G. Bell, president, California Association of RSES; George S. Jones, Jr., managing director, ARI; and Irving J. Fajans, president, ARW.

2 p.m.—"Electric Distribution Problems," Ed. V. Lathrop, assistant manager, Commercial Dept., Pacific Gas & Electric Co.

3 p.m.—"Air Problems in Air Conditioning Systems," George Hase, sales manager, Mueller Climatrol Div., Worthington Corp. General discussion on air distribution, layout of ducts, location of grilles, regulation of dampers and controls, and how to correct troubles the service engineer may encounter.

4 p.m.—"What a Super Market Operator Expects of a Service Contractor," Abe S. Miller, secretary-treasurer, Littleman Stores, San Francisco.

7 p.m.—"Automobile Air Conditioning," Willis Stafford, wholesale sales representative, Detroit Controls. Talk and demonstration on all types of automobile air conditioning systems, their problems and servicing.

SATURDAY, APRIL 6

9 a.m.—"Information Please."

10 a.m.—"How To Service Cooling Towers and Evaporative Condensers," Robert H. Savage, Water Chemists, Inc., Los Angeles.

11 a.m.—"Shootin' Service," W. H. Krack, sales manager, Sporlan Valve Co.

1 p.m.—"Oil Burners and Oil Heaters," L. O. Grauer, research laboratory staff, American Radiator & Standard Sanitary Corp., Redwood City, Calif. Discussion and demonstration, using an oil burner on the platform, of the working of a gun-type burner, how it is adjusted and repaired.

2 p.m.—"Refrigerant-22 and Related Problems," John Bopp, manager, refrigeration sales, Development Dept., New Products Div., Ansul Chemical Co.

3 p.m.—"Installation and Servicing of Remote Condensers," by Dan D. Wile, executive vice president and chief engineer, Recold Corp., Los Angeles.

4 p.m.—"Design and Application of Insulation in Refrigeration and Air Conditioning," Charles Q. Livingston, technical sales service, Insulation Div., Armstrong Cork Co. Use of various types of insulating material, inside and outside ducts, and piping, for insulation effect and noises, including insulation for low temperature applications.

6:30 p.m.—Cocktail hour.

7:30 p.m.—Banquet and entertainment.

SUNDAY, APRIL 7

10:30 a.m.—"Information Please."

1 p.m.—"How To Sell Quality," a motion picture from Air Conditioning & Refrigeration Wholesalers showing in a humorous manner how to, and how not to, attempt selling.

1:30 p.m.—Soldering contest sponsored by Mueller Brass Co.

Government Contracts

SYNOPSIS OF PROPOSED PROCUREMENT

NOTICE TO SMALL FIRMS

Headquarters, Oklahoma City Air Materiel Area, Tinker Air Force Base, Okla., Attn.: Procurement Division OCPLM
CONTRACTUAL REPAIR AND/OR OVERHAUL of Class 17A Compressors & Steam Cleaners, Class 19A Heaters & Portable Refrigeration Coolers & Class 34B Blowers & Pumps /including Federal Group Nos. & NL Nos./ as generated and called for on time and material basis est. 5,000 manhours contract period shall be from the date of government acceptance for approx. one year —Contract—IFB PLM-57-10Q/LP/—Bid Opening 20 March 57.

Headquarters Air Material Command (MCPSDC-2), Wright-Patterson Air Force Base, Ohio. Kenmore 7111, Ext. 3-1396.
DEHUMIDIFIERS Photographic film drier electric removing capacity 7 lb. water per hour (Type FL-1) in accord with Mil Spec. MIL-D-4686 (USAF) and amend No. 1 dated 8 Oct. 56—Increment quantities 239 to 342—IFB 57-152B—Bid Opening 25 March 57.

Directorate of Procurement and Production, Kelly Air Force Base, Texas.
AIR CONDITIONING of Telephone Exchange Building 1650, Kelly AFB, Texas —Job—IFB-41-608-57-250—Bid Opening 4 April 57.

ARMY

Contracting Officer, U. S. Military Academy, West Point, N. Y.
ICE CUBE PRODUCING MACHINE—1 ea.—IFB MA-30-145-57-236B—Bid Opening 22 March 57.

Army Map SVC., Washington, D. C.
REPLACEMENT COOLING COILS FOR AIR CONDITIONING SYSTEMS nrs N3-4-5, W3,C3N4, C3S and E4, located at U. S. Army Map Svc, 6500 Brooks Lane, Washington 25, D. C.—Bid sets available thru 18 March 57—Job—IFB ENG 49-018-57-71—Bid Opening 22 March 57.

NAVY

General Stores Supply Office, 700 Robbins Ave., Philadelphia 11, Pa.
FILTER AIR CONDITIONING, Spec. MIL-F-16552B (Ships) Amend. 2 (QPL)—978 ea.—IFB 155-1778-57B—Bid Opening 1 April 57.

GENERAL SERVICES ADMINISTRATION

General Services Administration, Region 3, Business Service Center, 7th and D Sts., S.W., Washington 25, D. C.
The following items are procured under IFB R2D-84184-R—Bid Opening 3/25/57.
AIR CONDITIONING UNITS, window mounted, with air-cooled condensers, 208 volt, 60 cycle, 1 phase, a.c. Type I, Fed. Spec. OOA-372 and Amend. 1, capacity 7,500 B.t.u./hr., 300 ea.—CAPACITY 10,000 B.t.u./hr., 50 ea.

Heald Supply Operating From Rented Warehouse Following Fire

BILLINGS, Mont. — Heald Supply Co.'s fire-swept warehouse can be repaired and operating again within two to four months, according to one of the principals.

The local RCA and RCA-Whirlpool distributor is now operating from a warehouse rented recently after fire caused damage estimated at more than $300,000.

Most of the fire damage was to the shipping department of the warehouse and it was estimated that 95 to 98% of the products were destroyed.

For more information about products advertised on this page use Information Center, page 66.

BUYING OR SELLING . . .

No matter which side of the desk you're on, you need the NEWS

The very reasons you read the NEWS . . . for information and to keep abreast of this fast-moving industry . . . make it your most important advertising medium! Your customers and prospects alike turn to the NEWS every week—just as you do—to learn the latest from the editorial columns and the advertising pages.

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The Newspaper of the Industry

The Newspaper That Carries More Advertising By Far Than Any Other Publication In The Field.

ABP ABC AUDITED PAID CIRCULATION

450 West Fort Street, Detroit 26, Michigan

NEW YORK, 521 Fifth Ave., MUrray Hill 2-1928—9, Robert M. Price.
CHICAGO, 134 S. LaSalle St., FRanklin 2-8093, Allen Schildhammer.
DETROIT, 450 West Fort St., WOodward 2-0924, J. B. Sullivan.
LOS ANGELES, 4710 Crenshaw Blvd., AXminster 2-9501, Justin Hannon.

Philadelphia Electric Statement--

(Concluded from Page 1)

EEI-NEMA Committee on Air Conditioning and Refrigeration Equipment.

The statement says that the company will "continue to waive, for the present, the locked roto limitations on single phase, 230-volt air conditioning installations as outlined in its Electric Service Requirements" but "in the meantime data obtained from ARI indicates that some reasonable relationship exists between locked rotor currents and compressor running currents under ASRE test conditions.

"On this basis, in order to establish reasonable limits for the design of service facilities to our customers comparable to that normally supplied on a customer class basis the following motor characteristics will be used for the evaluation of service facilities requested:

Motor Characteristics For Evaluation

(Expressed in terms of a relationship of compressor running current under ASRE test conditions, and maximum permissible locked rotor current.)

Compressor Current	Locked Rotor Current
12 amp or less	60 amp.
12.1 to 18 amp.	80 amp.
18.1 to 30 amp.	100 amp.

The "maximum permissible locked rotor current" stated in the tabulation is the sum of the locked rotor current of the compressor motor and the locked rotor currents of any auxiliary motors that may be started approximately simultaneously (within one second) with it.

The locked rotor current, says the statement, is based on equipment designed, installed, and adjusted so that frequency of compressor starts will not exceed four per hour, with long periods of continuous operation under hot weather conditions.

Industry design and application engineers feel that this new statement of policy is relatively liberal, with the 100 amperes maximum permissible locked rotor current on single phase installations (some utilities have a 75-amperes limitation).

However, it is felt that it will still eliminate most single phase 5-hp. compressor applications, unless extensive auxiliary starting equipment is added.

The requirement calling for no more than four compressor starts per hour "may be desirable from the utility standpoint, but I don't see how this can be guaranteed on every job, or how the utility intends to enforce it," one engineer commented.

The provision in the statement of policy says that equipment which fails to conform might be altered to come withing the requirement by use of auxiliary devices, is believed to refer to the use of current limiters which serve to permit incremental starting of compressor, and bring about a reduced locked rotor current.

Principal objections to such auxiliary starting devices are high costs, and the complication of installation procedures.

"However, it has not been possible to obtain from the air conditioning industry sufficient authoritative data on the electrical characteristics and operating cycles of equipment that is currently being manufactured. Steps are being taken in this regard, but progress is slow."

Thinks Publicity Will Be Beneficial

Anderson told the NEWS that he thought that any publicity given to the utility's statement of policy would be beneficial both to the air conditioning industry and the electrical utility industry, and he said further:

"We recognize as you do, that residential air conditioning will continue to increase in popularity and acceptance. It is this fact that makes it necessary for utilities such as ours to develop some set of rules with respect to locked rotor currents and frequency of starting.

"It has been the history of the development of air conditioning equipment that unless utilities do take cognizance of the motor starting situation, locked rotor currents and their control are not given the necessary consideration. In spite of the future wide acceptance of air conditioning equipment, there will continue to be many of our customers who do not enjoy its benefits, but whose services are materially affected by their neighbors who do have such equipment. Sensible rules are therefore needed for the protection of all.

'Will Not Impede Orderly Development'

"Such rules will not impede the orderly development of the air conditioning market, as some have stated, but on the contrary, will do much to guide its rapid development and minimize the servicing difficulties that would otherwise be experienced during the life of the equipment.

"As chairman of the EEI Group of the Joint ARI-EEI-NEMA committee, I want to stress the importance of developing a revised set of motor starting current rules, applicable throughout the country. The utilities are ready and must soon take some action in this regard.

Following is the text of the Philadelphia Electric Co. statement of policy with regard to single phase, 230-volt air conditioning installations:

Text of Statement

"After careful review of data made available by the manufacturers of air conditioning equipment with regard to running and locked rotor current characteristics of compressor motors, Philadelphia Electric Co. will continue to waive, for the present, the locked rotor limitations on single phase, 230 volt motor installations as outlined in its Electric Service Requirements as modified by our letter of May 1, 1956.

"Such waiver will be for an interim period during which it is hoped that sufficient factual data may be developed, and study given to this problem on a national basis, so that a position may later be taken which will avoid hardship to both the manufacturers of air conditioning equipment and the electric utilities.

"In the meantime data obtained from ARI indicates that some reasonable relationship exists between locked rotor currents and compressor running currents under ASRE test conditions. On this basis in order to establish reasonable limits for the design of service facilities to our customers comparable to that normally supplied on a customer class basis the following motor characteristics will be used for the evaluation of service facilities requested:

Compressor Running Current ASRE Test Conditions	Maximum Permissible Locked Rotor Current
12 Amps. or less	60 Amps.
12.1 to 18 Amps.	80 Amps.
18.1 to 30 Amps.	100 Amps.

NOTES

1. The "maximum permissible locked rotor current" stated in the tabulation is the sum of the locked rotor current of the compressor motor and the locked rotor currents of any auxiliary motors that may be started approximately simultaneously (i.e., within one second) with it.

2. The "maximum permissible locked rotor current" stated in the tabulation is based on equipment designed, installed, and adjusted so that frequency of compressor starts will not exceed four per hour, with long periods of continuous operation under hot weather conditions.

3. Equipment having locked rotor currents in excess of the tabulated values and/or not otherwise meeting the requirements indicated in Notes 1 and 2, will be considered for exception and possible acceptance on the basis of the capacity of the company's distribution system at the location at which the installation is to be made. The company may at its option, require the installation of auxiliary devices as necessary to bring the equipment to conformance with this Statement of Policy.

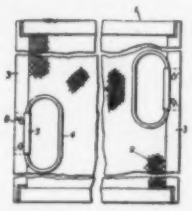
4. At its option, the company may send a letter to the customer advising him that in event his installation results in service characteristics objectionable to him and/or his neighbors, it will be necessary that he modify his installation and/or equip it with controlling devices, at his expense.

5. Single phase, 230 volt installations are limited to equipment having compressor motor running currents under ASRE conditions of a nominal 30 amperes or less.

PATENTS

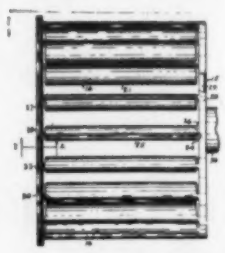
Week of Nov. 20 (Continued)

2,771,154. FILTER FRAME HANDLE CONSTRUCTION. Don J. Gonzalez, Louisville, Ky., assignor to American Air Filter Co., Inc., Louisville, Ky., a corporation of Delaware. Application Sept. 12, 1952, Serial No. 309,342. 6 Claims. (Cl. 183—48.)



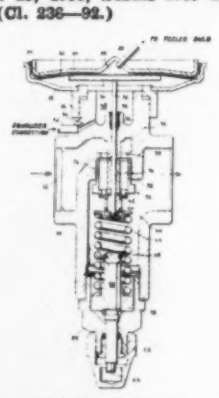
1. A handle retaining structure for an open-faced filter frame having perimetric walls and face flanges to retain a filter medium, at least one face flange extending from a perimetric wall laterally over the adjacent margin of the adjacent face of the frame and terminating in a free edge, comprising: a plate having an apertured flat portion extending in face-to-face engagement with the inner face of said one face flange and a handle carrying portion projecting laterally therefrom beyond the free edge of said one face flange; and a tab in said face flange turned inwardly into the aperture of said plate, an edge of said inturned tab providing a cam engaging an edge of said aperture and, through such engagement, urging said plate laterally along the underside of said face flange in the direction of the adjacent perimetric wall.

2,771,241. BLOWER WHEEL. Lowell Eugene Sprouse, Columbus, Ind., assignor to Vernco Corp., Columbus, Ind., a corporation of Indiana. Application Nov. 25, 1953, Serial No. 394,271. 4 Claims. (Cl. 230—134.)



1. A blower wheel comprising a circular base plate; a plurality of blades extending normally and circumferentially of said plate; the outer end portion of each of said blades having a laterally entering notch traversing the blade to define an outer end portion extending across the blade approximately half the width of the portion leaving a neck; a finger extending laterally from each of said outer ends intermediate said notch and the outer end edge of the blade and lapping over the next adjacent blade outer end portion; said outer end portion of one blade encircling and compressibly gripping therewithin the finger of the next adjacent blade.

2,771,248. HIGH CAPACITY THERMOSTATIC EXPANSION VALVE. Edward S. Ehlke, Milwaukee, Wis., assignor, by mesne assignments, to Controls Co. of America, Schiller Park, Ill., a corporation of Delaware. Application Jan. 19, 1955, Serial No. 482,765. 7 Claims. (Cl. 236—92.)



1. A thermostatic expansion valve of large capacity in which the head pressure has little effect on the operating characteristics of the valve comprising, a valve body having an inlet and an outlet and a partition wall therebetween, an annular port in said partition wall, coplanar annular valve seats inside and outside the annular port on the outlet side of the port, a push pin passing centrally of the annular port through said partition, means including a diaphragm defining a variable volume chamber, means connecting said chamber to a feeler bulb subjected to temperature variations, a flat annular valve assembly on the outlet side of the port and adapted to seat on said annular surfaces, said push pin being operatively connected to said diaphragm and to said valve assembly, spring means acting on the valve assembly towards the annular seats, and means allowing communication between the center of the valve assembly and the outlet so that flow through the port when the valve is open can flow to the outlet either externally or internally of the valve assembly.

Week of Nov. 27

2,771,748. AIR CONDITIONING SYSTEMS FOR AUTOMATICALLY HEATING AND COOLING AN ENCLOSED AIR SPACE. John R. Prosek and John S. Palmer, Evansville, Ind., assignors, by mesne assignments, to Whirlpool-Seeger Corp., a corporation of Delaware. Application May 6, 1954, Serial No. 428,002. 8 Claims. (Cl. 62—4.)

1. In an air conditioning system for conditioning the air in an enclosed space and having a reversing valve operable to reverse the functions of the heat exchangers thereof, a solenoid mounted in cooperation with said reversing valve and operating responsive to the energization thereof for operating said reversing valve, a power

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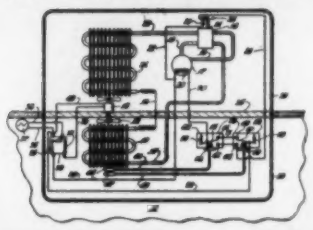
PATENTS

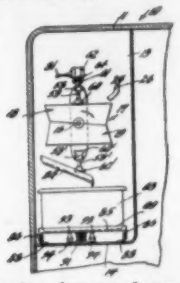
(Continued from preceding page)

source, a cooling thermostat, a heating thermostat, each of said thermostats being formed to be adjustable over certain temperature ranges, means for simultaneously adjusting each of said



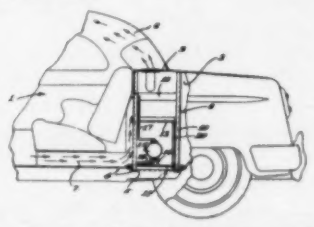
thermostats by the same amount over spaced apart cooperating ranges, circuit means connected in said air conditioning system to said solenoid, said power source and associated with said thermostats for causing the energization of said solenoid and the operation of said air conditioning system responsive to the operation of said heating thermostat at certain temperatures and for causing the operation of said air conditioning system responsive to the operation of said cooling thermostat at certain other temperatures.

2,771,749. ICE MAKING APPARATUS. Albert R. Miller, Miami Beach, Fla., assignor of one-half to Fay G. Johnson, Jacksonville, Fla. Application July 7, 1953, Serial No. 366,603. 5 Claims. (Cl. 62—7.)



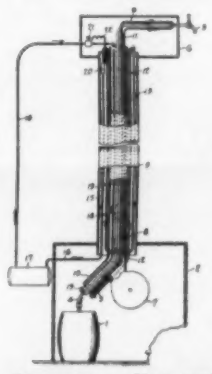
1. A device for producing automatically successive units of frozen liquid, comprising a supply of liquid, a compartment, having front, back, side, top and bottom walls, which is subject to below freezing temperature, a generally horizontal shaft mounted for turning in one of said compartment walls, a pair of freezing containers formed of heat-conductive material and having a common bottom disposed therebeteween, said freezing containers being mounted on said shaft with said shaft extending longitudinally through substantially the midpoint of said common bottom, each said container being formed with a greater volumetric capacity on one diametric side of said shaft than on the other, whereby the contents of said container will be acted upon by gravity to pivot the container about the axis of said shaft, means for holding said containers against pivotal movement, means for transferring a charge of liquid from said supply to the uppermost of said containers whereby said charge is frozen to a solid state within the container, means for withdrawing said holding means whereby said containers are gravitationally pivoted to bring the empty container to the uppermost position, means for transferring a charge of liquid to the empty container whereby the heat from the new charge is transferred through the walls of containers to incipiently melt the container contracting portion of said charge and loosen it for discharge from said first container.

2,771,750. PACKAGE AIR CONDITIONING UNIT FOR AUTOMOTIVE VEHICLE. Oscar Oldberg, Huntington Woods, Mich., assignor to Houdaille Industries, Inc., Detroit, Mich., a corporation of Michigan. Application April 12, 1954, Serial No. 422,308. 2 Claims. (Cl. 62—117.)



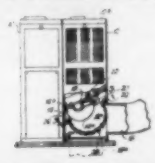
1. In a vehicle having a package shelf and a luggage compartment, a complete air conditioning unit mounted in the luggage compartment beneath said shelf comprising a frame structure housing air circulating means communicating with the interior of the vehicle through said package shelf, evaporator means horizontally disposed beneath said air circulating means, a condensate catching pan in underlying spaced relationship therewith for collecting the condensate drippings from the evaporator, passage means intercommunicating the interior of said vehicle with said evaporator means above the condensate pan for providing air circulation, a condenser defining the closed bottom of the structure and having upstanding side walls forming a pan, the underside being exposed to the ambient air, means for guiding the condensate from said pan to the condenser pan to enhance the efficiency of said condenser, and a compressor between said pan and condenser.

2,771,752. BEER COOLING APPARATUS. Edward E. Tennant, Milwaukee, Wis., assignor to Jos. Schlitz Brewing Co., Milwaukee, Wis., a corporation of Wisconsin. Application Oct. 18, 1954, Serial No. 462,856. 3 Claims. (Cl. 62—141.)



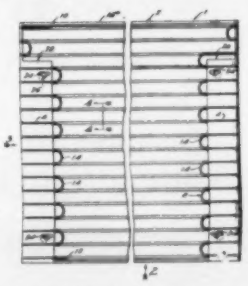
1. In a beverage cooling system having a tap secured to a closed tap box and connected to a source of beverage in a refrigeration room remote from the tap by a beverage dispensing line extending through a shaft connecting the box and room, the combination which comprises refrigerating coils having a coolant therein and disposed to extend within said shaft from said room to the dispensing box and on either side of the beverage line, means to actuate the coolant to maintain the beverage in the line in a constant cooled condition, a passage in said shaft through which the beverage line extends, a second passage in the shaft separate from said first-named passage, and blower means provided adjacent the shaft to circulate refrigerated air through said passages in opposite directions and thereby in cooperation with the refrigerating coils effect cooling of the beverage flowing in the beverage line.

2,771,963. AIR CONDITIONING UNIT AND AIR FILTER THEREFOR. Robert Warren Eichorn, Marshalltown, Iowa, assignor to Lennox Industries, Inc. Application Dec. 24, 1953, Serial No. 400,228. 2 Claims. (Cl. 183—49.)



1. An air conditioning unit comprising in combination: a housing defining a vertically extending tube; means to impel air vertically through the tube to condition the same; an air filter of generally semi-cylindrical conformation disposed within the tube and oriented to receive air flow on its convex side and having marginal portions in the form of downturned hooks; and rails on the housing having tongue portions received in the marginal portions of the filter, the rails further having imperforate hood portions extending over the ends of filter and partially along the concave face thereof to form a seal.

2,772,077. TUBE ENVELOPING PLATE CONDENSER HAVING ROLLED ENDS, AND METHOD OF ITS CONSTRUCTION. Thomas H. Polad, Dowagiac, Mich., assignor to Rudy Mfg. Co., Dowagiac, Mich., a corporation of Michigan. Application March 15, 1951, Serial No. 215,822. 3 Claims. (Cl. 257—256.)



1. In a plate-type heat exchanger, a sheet metal member formed to provide a substantially main planar portion, and rebent curved side members extending laterally from the plane of said main portion and into a plane spaced from the plane of said main portion, said portions in said spaced plane being provided with means for securing such exchanger to a vertical surface, said sheet metal member being deformed to provide spaced substantially parallel channels extending laterally completely across said sheet metal member inwardly from the outer surface thereof to provide flat webs therebetween, an endless conduit having spaced portions positioned within said channels and U-shaped portions connecting said spaced portions and positioned in spaced relation to said sheet metal member in said spaced plane, the interior walls of said channels engaging the walls of said spaced conduit portions and being formed therearound to present a smooth outer surface to said exchanger.

3. The method of making a tube and plate heat exchanger from a length of conduit and a section of substantially flat sheet metal which comprises the steps of: forming space trough means in said sheet metal section extending completely across one dimension thereof while maintaining flat webs disposed between the trough means and keeping said webs in a common plane, forming said conduit to have straight portions joined by end loop portion, placing the straight portions of said formed conduit in said trough means with the end loop portions extending therebeyond, of supporting the walls of said trough means against movement outwardly away from each other, confining the webs at the ends of said walls against movement out of said plane, and applying a force to said troughs to move the bottom of the trough means toward the plane of said webs and thereby collapse the walls of the trough means inwardly to cause the inner portions thereof to wrap around the periphery of the straight portion of the conduit, and limiting the movement of the outer portions of said trough walls to said plane to thereby provide a substantially continuous flat surface to one side of said exchanger.

Westinghouse To Make Products for Ward

PITTSBURGH — Westinghouse Electric Corp. and Montgomery Ward & Co. announced that they have entered into an agreement whereby Westinghouse will manufacture a new line of automatic washers and clothes dryers, as well as a radio receiver and television receiver for the Montgomery Ward line.

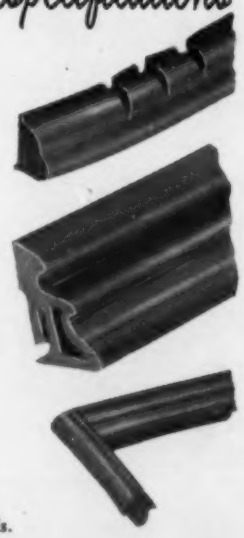
The firms said the products will be manufactured according to design and performance specifications set by Montgomery Ward. Ward executives likewise will establish their own styling and functional characteristics.

First units to be made under the contract will be for the current Montgomery Ward TV-radio line and for the 1958 Montgomery Ward laundry equipment line.

Servel Re-Elects All Directors, Adds One

DOVER, Del. — All of the directors of Servel, Inc. were re-elected at the annual stockholders' meeting here, and John W. Hall, executive vice president and general manager, was elected as the tenth member of the board, the company announced.

The re-elected directors are Louis Ruthenburg, chairman; Duncan C. Menzies, president; William V. Griffin, J. Patrick Lannan, Hunter S. Marston, H. Irving Pratt, W. F. Rockwell, Jr., A. Lightfoot Walker, and Robert E. Walker, it was disclosed.



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ADVERTISEMENTS set in usual classified style. Box addresses count as five words, other address by actual word count. Please send payment with order.

POSITIONS WANTED

SERVICE MANAGER—Field service engineer: 20 years' experience in refrigeration and air conditioning. 7 years' supervision, 8 years as contractor. Prefer Detroit area. Detroit class B license. BOX A5759, Air Conditioning & Refrigeration News.

POSITIONS AVAILABLE

OPPORTUNITY FOR manufacturer's representative: To increase your earnings, sell a full line of freezers, beverage coolers, display cases, dual temperature reachins and walkins. We manufacture a quality line to meet competition. Territories now available, write HOWARD REFRIGERATOR CO., INC., 4475 Worth Street, Philadelphia 24, Pa.

MANUFACTURER'S REPRESENTATIVE, with commercial refrigeration or shelving sales experience, wanted to sell fast growing line of no-bolt adjustable steel shelving; a quality product packed full of features. Very competitively priced. LOZIER-LINE MFG. CO., 4402 Florence Blvd., Omaha 10, Nebraska.

MANUFACTURER'S REPRESENTATIVE now calling on refrigeration men, to sell complete line of top quality commercial refrigeration for grocery, bakery, restaurant, institutions. Protected territory in Michigan, Indiana, New England. THE C. SCHMIDT COMPANY, 1712 John Street, Cincinnati 14, Ohio.

AIR CONDITIONING field engineers—Leading manufacturer of commercial and industrial air conditioning equipment. Degree required. Extensive travel. BOX A5758, Air Conditioning & Refrigeration News.

CHICAGO METROPOLITAN area. Wholesale distributor of air conditioning and refrigeration equipment and supplies has openings in going territories for sales engineers with previous selling or contracting experience. Major lines, Brunner (exclusive), Kramer Trenton, Halstead and Mitchell. Commission sales, good guarantee first year. Replies kept confidential. Contact H. F. Krantz, Sales Mgr., 2611 Lake Street, Melrose Park, Illinois, SERVICE PARTS COMPANY.

DISTRICT SALES manager wanted: Automatic heating and air conditioning manufacturer has immediate opening in Eastern Pennsylvania territory for district manager. Excellent opportunity for qualified salesman. Home territory of manufacturer. Product backed by complete sales program. Send picture, full resume, and reference. Salary, commission and expenses. BOX A5760, Air Conditioning & Refrigeration News.

CARRIER CORPORATION—Regional specialist to sell central station air conditioning equipment to distributors in Southeast ten-state area, headquartering in Atlanta. Require at least five years' experience and engineering degree or equivalent. Age limit 40. BOX A5761, Air Conditioning & Refrigeration News.

EQUIPMENT WANTED

WANTED USED refrigerators in working condition—Large lots of same model from apartments or projects, anywhere in U. S. No assorted tradeins. BEACH REFRIGERATOR CO., 196-11 Northern Blvd., Flushing 58, New York. Phone Flushing 7-6161.

WANTED: MANUFACTURERS surplus, outdated or obsolete refrigeration items—expansion & water & shutoff valves, controls, relays, dehydrators, units, tubing fittings, etc. All sales on a cash close-out basis, large or small quantity. Write or call: COMMERCIAL CONTROLS CO., 257 East 3rd Street, New York 9, N. Y. ORegon 3-7210.

EQUIPMENT FOR SALE

ARCTICAIRE AIR conditioning equipment 2, 3 and 5 ton packaged water chillers, air or water cooled. Direct expansion air conditioning systems 2, 3 and 5 ton, air or water cooled, self contained and remote types. Write for literature and prices. ARCCO, MANUFACTURERS AGENTS, INC., Merchandise Mart Bldg., 2201 Grand Avenue, Kansas City, Missouri.

NEW BRASS fittings: Quantity of miscellaneous Mueller flare and Streamline brass fittings in ¼, ⅜, ½ and ⅝" refrigeration tube size. Closing out our stock of these and other refrigeration items at below present day factory cost. Write for list. SARGENT-ROUNDY CORPORATION, Randolph, Vermont.

NAME PLATES and numbered valve tags—Now available your free 1957 catalog showing most complete line of identification plates and tags for air conditioning and refrigeration use. Easy to affix. Low cost. Engineer and code approved. Free samples. Write SETON NAMEPLATE COMPANY, Dept. AC37, 431 West Rock Avenue, New Haven 15, Conn.

MISCELLANEOUS

ATTENTION SERVICEMEN: Send for free circulars and bulletins on refrigeration parts and equipment. Real money saving values: WALTER W. STARR; 2833 Lincoln Avenue, Chicago 13, Illinois.

Hospital Cooling--

(Concluded from Page 1, Col. 3)

of anesthesiology departments at St. Francis General, Children's, Magee, and Presbyterian hospitals.

He said hospitals need air conditioning because it:

1. Speeds recovery of patients;
2. Increases efficiency of hospital personnel;
3. Reduces risk of an anesthetic explosion to the lowest possible level.

In an article in the journal, *Anesthesia and Analgesia*, Dr. Thomas reported that many hospitals now have their operating and delivery rooms air conditioned.

However, he added all hospital rooms should be air conditioned because "this makes patients more comfortable and actually helps them get better faster.

"Freedom from oppressive heat and humidity conserves energy, lessens fatigue, and permits hospital personnel to perform their duties under the most favorable conditions," he commented.

In cold weather, he continued, the air conditioning system "can be rigged up to provide heat"—so patients can enjoy "a perfect climate at all times."

Dr. Thomas cautioned, however, that hospitals need three different air conditioning units to meet variable needs.

One unit must take care of patient rooms, administrative departments, laboratories, and storage rooms.

A second, geared to supply a different level of humidity, is needed for operating, delivery, and recovery rooms.

A third unit is necessary for nurseries, he said.

Estimating that the average cost of air conditioning a hospital is about $75 per room a year, Dr. Thomas stated that this includes depreciation.

Texas Drive-In Theaters Explore Ways of Piping Conditioning to Cars

DALLAS—The Texas Drive-In Theater Owners' Association has a committee working on methods of piping air conditioning to cars, according to Eddie Joseph, of Austin, association president.

At a recent meeting in Dallas, the problem of beating the Texas heat was discussed, but left unsolved.

A drive-in in Indianapolis is the only one in the nation so far to try air conditioning, Joseph said. However, opinion was expressed that the system is too expensive for mass use.

Opens Westinghouse Outlet

JACKSONVILLE, Fla.—With Stephen A. Freel, Sr. as manager, the Big Appliance Center has opened at 3120 Beach Blvd., offering Westinghouse household appliances and television sets. A kitchen modernization department will be featured.

Church To Be Cooled

FAYETTEVILLE, Ark.—Central Methodist church here has advertised for bids for installing 75 tons of additional air conditioning to be added to the capacity of an existing system.

Dupont Drops 'Kinetic' Name, Retitles Div. 'Freon' Products

WILMINGTON, Del.—A new and more accurately descriptive name—"Freon" Products Div.—will be used after April 1 to identify the division of du Pont's Organic Chemicals Dept. concerned with manufacture and sale of fluorinated hydrocarbon refrigerants, aerosol propellents, solvents, and fire extinguishing agents.

The change drops the du Pont designation of "Kinetic" Chemicals Div., under which the "Freon" compounds have been made and sold since mid-1950, when du Pont acquired all the assets of the 20-year-old firm, "Kinetic" Chemicals, Inc.

Du Pont officials pointed out that while the name "Kinetic" was well known to older members of the refrigeration industry it holds little meaning for newer people in that business as well as in the 10-year-old aerosol industry, because it had never been used as a trade-mark.

On the other hand, the trademark "Freon" has been applied to all du Pont's fluorinated hydrocarbon compounds since their introduction more than a quarter of a century ago, and has come to be identified intimately with them.

From an initial laboratory-scale plant at Deepwater Point, N. J., du Pont's facilities for producing "Freon" fluorinated hydrocarbons have grown there to an 18-acre plant that turns out tons each day.

Other plants of du Pont's "Freon" Products Div. are located at East Chicago, Ind., Louisville, Ky., and Antioch, Calif.

Western Show--

(Concluded from Page 1, Col. 5)

such as architects, engineers, hotels and motels, have indicated that they will be attending in considerable number. The attendance of industry representatives is expected to be drawn from all points west of the Mississippi.

On the final two days, (May 7 and 8) the general homeowning public will be invited to attend the Exhibit, to see the latest developments in the field of air conditioning.

On May 4, 5, and 6, the Exhibit will be open to the trade only, which includes buyers and users of air conditioning equipment, as well as those installing it, states Fred J. Tabery, exhibit manager, who maintains offices at 3443 S. Hill St., Los Angeles.

A regional meeting and conference of the American Society of Heating & Air-Conditioning Engineers (ASHAE) will be held May 6 and 7 at the Ambassador hotel in Los Angeles. Gerry Block, care of Holland-Murse Co., 4018 Laurel Canyon Blvd., North Hollywood, is in charge of arrangements.

One day's session will be comprised of a symposium on the air conditioning of existing buildings. The other will cover calculations investigating the application of air conditioning to a school, control of air-borne sound transmissions, impingement filters and smog, and the problem of recruiting personnel.

Attend 4-Day Course

WOBURN, Mass.—Refrigeration problems were among the topics discussed during a recent 4-day store engineering course here, sponsored by Maintain Store Engineering.

The course stressed the importance of work simplification and efficient management of supermarkets.

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